ARCHITECTURAL RECORD Adaptive Reuse 2/1994

ARCHITECTURAL RECORD
1994 February

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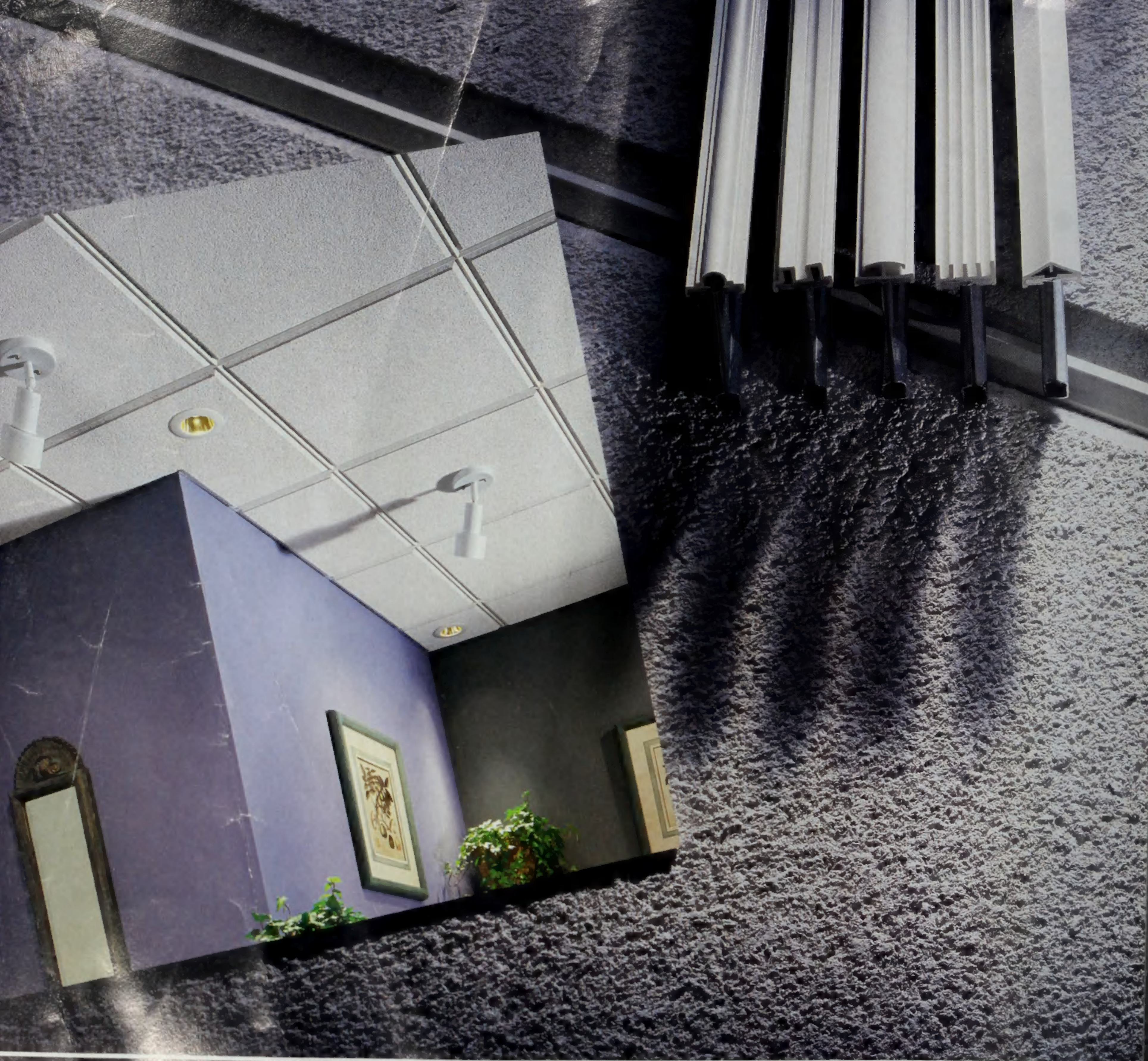

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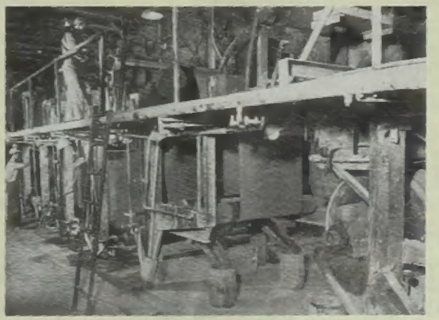

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Letters

When Less Is More

We were pleased to contribute to "Client Downsizing Boosts Business for Architects" [RECORD, September 1993]. However, several points need clarification:

Office and workspace sizes and arrangements: Solutions that are less expensive initially may grow more costly over time for organizations with high churn and turnover rates. "Offices with sheetrock walls," Lawrence Lander [Houston architect] states, are "cheaper" than open-office furniture systems. This is true only at initial cost, and when rapid and frequent changes are *low* client priorities. Reconfiguration of ceilings, lighting, life safety, and hvac systems associated with the reconfiguration of "sheetrock wall" offices are costly, difficult to change quickly and may compromise the quality of systems over time. Business and employee disruption, systems interruption, construction waste, and debris in the workplace during facility and organization changes are factors to weigh when developing appropriate workplace standards.

Privacy, and the "there goes privacy" comment, must be considered in the specific context of the work activities. Is complete privacy, with no on-lookers and a closed door, required for one-on-one or small group meetings? Most often it is not; observe the productive meetings, confidential matters, and negotiations which take place in crowded restaurants.

Work-at-home: An evolving work pattern which requires observation and study is the accepted notion that work is easiest at home. Work-at-home arrangements may easily accommodate tasks which require little supervision or collaboration when technology links allow access to resources in the office. These arrangements can benefit both the employer and the employee by offering, for example, flexible working schedules, opportunity for more time with family, and reduced commuting time and expenses. Under the heading "Chucking Offices," Mr. Hoyt implies that this arrangement permits companies to eliminate or reassign the space occupied by work-at-home employees. While this is possible, and may be advisable in certain offices, the broader issue passed by without exploration: working at home is *convenient* because current offices are poor places to get anything accomplished. Work-at-home may be more a symptom of a dysfunctional office environment than a solution to reduce company overhead. Shifting the space burden to employee residences (or customers' spaces) is shortsighted if only to lower expenses. These actions are most effective when supporting customer sales, service and satisfaction. Let the focus remain on providing functional, flexible, and productive workplaces that benefit both employer and employee.

Responsible design solutions must solve problems, not avoid them or create new ones.

Joseph T. Connell
Associate Design Manager
The Environments Group
Chicago

Academic Tiff

I was surprised to find a review of my book, *Scogin, Elam, and Bray: Critical Architecture/Architectural Criticism* (Rizzoli, 1992) in your September issue (page 50). But I was not

Continued on page 18

Calendar

Through February 13
From Mars to Main Street: America Designs, 1965-1990. National Building Museum, Washington, D. C., 202/272-2448.

February 20-April 3
Pedro E. Guerrero's portraits of Frank Lloyd Wright are on display in the Lobby Gallery of the Deutsche Bank Headquarters, 31 W. 52nd St., New York City.

Through February 24
Vienna Architecture and Vienna, Urban Space at the Chicago Athenaeum. Call 312/280-0131.

February 22-26
Making Cities Livable. Urban reuse, and other topics. San Francisco. Fax: 408/624-5126.

February 26
The Future of the American City. Yale Law School, New Haven. Urban revitalization. Call 203/772-2788.

March 5-10
Northern Construction. Anchorage, Alaska. Representatives from the construction industry will discuss the constraints of and innovations of building in northern and/or remote regions. Call 907/343-4314.

March 18-20
The first Virginia Design Forum will be held at The Homestead in Hot Springs, Va. Call 804/644-3041.

March 23-25
WestWeek 94 at the Pacific Design Center, L. A. Call 310/657-0800.

Competitions

- Ceramic Tile design competition offers cash awards in four categories. Entry deadline: March 15. Tile Promotion Board, 407/743-3150.
- HYLAR awards outstanding use of PVDF finish steel or aluminum cladding, roofing and panels. Deadline: March 31, 1994. Write P. O. Box 5643, Brussels, or fax 32-2-660-58-72.
- American Institute of

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ARCHITECTURAL RECORD

ARCHITECTURAL RECORD (Combined with AMERICAN ARCHITECT, and WESTERN ARCHITECT AND ENGINEER) (ISSN0003-858X/94 February 1994, Vol. 182, No. 2. Title ® reg. in U. S. Patent Office, copyright ©1994 by McGraw-Hill, Inc. All rights reserved. Indexed in Reader's Guide to Periodical Literature, Art Index, Applied Science and Technology Index, Engineering Index, The Architectural Index, the Architectural Periodicals Index, the Avery Index to Architectural Periodicals, and the Construction Index.

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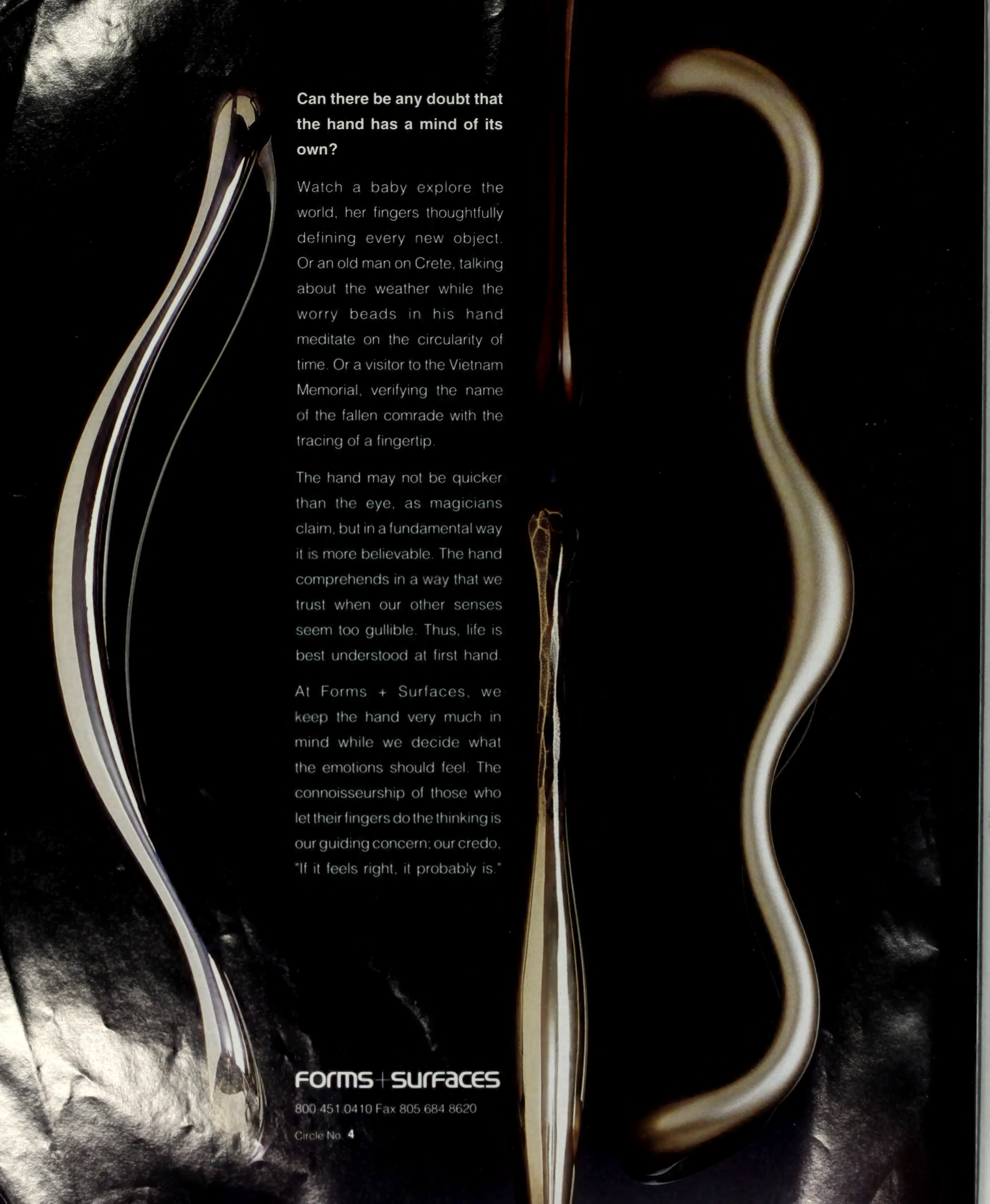

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The hand may not be quicker than the eye, as magicians claim, but in a fundamental way it is more believable. The hand comprehends in a way that we trust when our other senses seem too gullible. Thus, life is best understood at first hand.

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Circle No. **4**

ARCHITECTURAL RECORD Adaptive Reuse **2/94**

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Preservation of artifacts like the huge Duquesne Works, near Pittsburgh, is among the challenges of a new, regional form of historic preservation. Page 24.

Next month

Building Types Study 714
Laboratories
Marine science, pharmaceutical, and plant genetics research laboratories are covered.

Also in March

- Two new buildings by Charles Moore with collaborators.
- Fumihiko Maki's Center for the Arts, San Francisco.
- A Queens, N. Y., police station by Perkins Eastman.
- The Architecture Institute in Rotterdam by Jo Coenen.
- *The Profession* includes an in-depth look at architectural salaries.

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THE PROFESSION 23	Preservation's Vast New Horizons (Agenda). Landmark Dilemma: How Much Upgrading Is Enough? (Seismic & Preservation). Microstation 5 (Software Reviews). Through the Roof—Skylights and Scuttles (Products).
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Cover: Old Bird House Renovation and Rehabilitation International Wildlife Conservation Park, New York City
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SUPPLEMENT ON LIGHTING IS INCLUDED WITH THIS ISSUE
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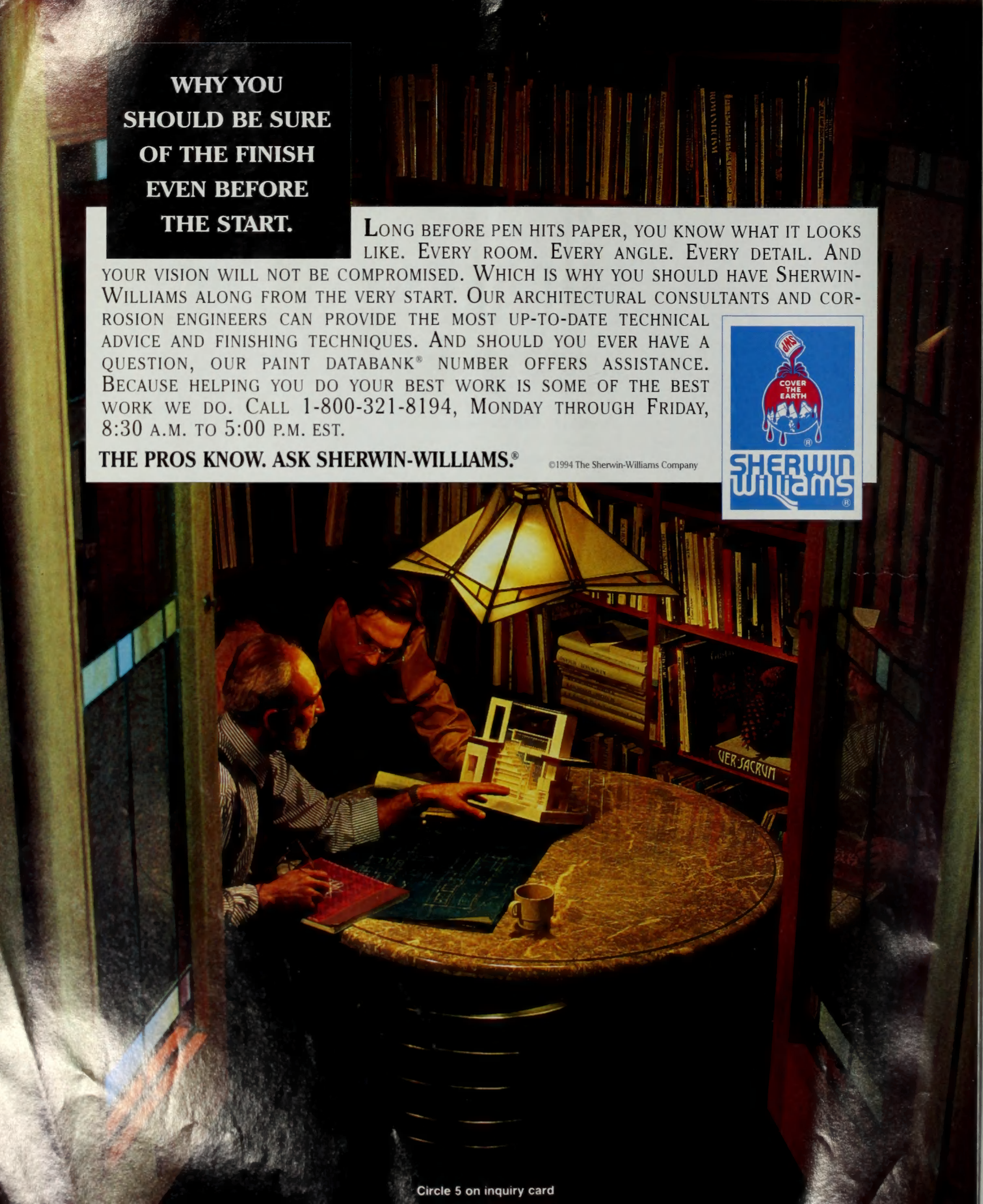

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On The Urban Front: A Look at the Bright Side

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Clifford A. Pearson, observations, books
Charles K. Hoyt, at large
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Charles D. Linn, RECORD LIGHTING

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A note of despair has crept into the national dialog over the future of America's inner cities. Cassandras are looking at a record dating back to the gory days of urban renewal, when planners and politicians strode through our older cities with a meat cleaver and supplanted the existing fabric with a daunting mix of new highways, office buildings, apartment towers, and parking structures of such gross taste and invasive presence that, a generation later, they had to be knocked down or retrofitted to accommodate a more demanding, discriminating American temper.

As time went on, new approaches were tried. The War on Poverty of the 1960s and the Model Cities program both sought to strengthen urban neighborhoods, often repositories of attractive but deteriorated buildings, through economic development. Then came the Community Development Block Grants (CDBG), which were supposed to cut through the federal bureaucracy and get the money back to the neighborhoods to use as they saw fit. Finally, the late 1980s and early 1990s introduced the concept of Enterprise Zones, intended to create jobs through federal tax breaks. This plan never made it into law, but has been tested at some state and local levels, with mixed results.

These programs, mainly tied to tax incentives, were attractive to politicians because they had voter appeal, and to the philanthropic establishment, which felt genuinely that a solution lay in the neighborhoods. But they were consistently hamstrung by the basic fact of major population movements out of those very neighborhoods: families that had made it moved out, to be replaced by new poor from other parts of the country and lately through massive immigration from Asia, Mexico and the Caribbean. Tax incentives could accomplish only so much, and purposes such as education, essential to employedness, had to come through other channels.

So it seems as though few of the programs achieved their stated purposes. Crime rose, and the best efforts to design livable community environments foundered on the rock of unemployment. In an article in *Metropolis*, long-time former New Haven mayor Richard Lee, an early champion of city revival, who had devoted his career to the task, reflects sadly as he drives through his city how few of the renewed neighborhoods had achieved lasting prosperity.

But the chapter isn't closed. Good did come out of the millions of hours of time and billions of dollars committed to the gargantuan task of preserving the texture of our urban fabric. Hundreds of urban neighborhoods were preserved for moderate-income families. Some neighborhoods flourished through gentrification, albeit at a price. Preservation and renovation have moved from the occupation of a cultural elite to a bread-and-butter philosophy of finding solid, often modest, infrastructure-rich but out of date buildings and converting them to healthy, viable new uses (see this month's Building Types Study, pages 85-127). Just as important is a change-of-heart that renovation is a city-only kind of notion. In suburban neighborhoods too, impact of the Seaside concept, however circumscribed its scope, tells us that making suburbs livable is a growing item on the nation's agenda.

In all of this the architect's role is critical, especially at the local level. Architects cannot alone deal with the social, financial and economic issues, but in focusing on the physical design opportunities and on the power to influence the other players, they must continue to contend—even for modest successes. *Stephen A. Kliment*

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New York City

Art Commission Confers Excellence-in-Design Awards

The Art Commission of the City of New York has conferred "Excellence in Design" architecture and landscape architecture awards on Scott Mahaffey's Inwood Hill Urban Ecology Center; Brooklyn Army Terminal renovations by Beyer Blinder Belle and Arthur L. Spaet & Associates; Diffendale & Kubec's restoration of Staten Island's P. S. 20 (left) for senior housing; DCI International's Morrisania Branch Library rehabilitation; Hardy Holtzman Pfeiffer's renovated and expanded Dance Theater of Harlem School; Samuel Karneal Thomas's Brizzi Playground reconstruction; Striver's Center streetscape reconstruction and site improvements by Johansson and Walcavage, and Daniel Frankfurt; and a special recognition award for sidewalk newsstands by Benjamin Thompson & Associates, Frances Halsband and Patsy Norvell, and James Garretson Architects. ■

Singapore

International Symposium Charges Architects to Embrace Ecology Through Technology

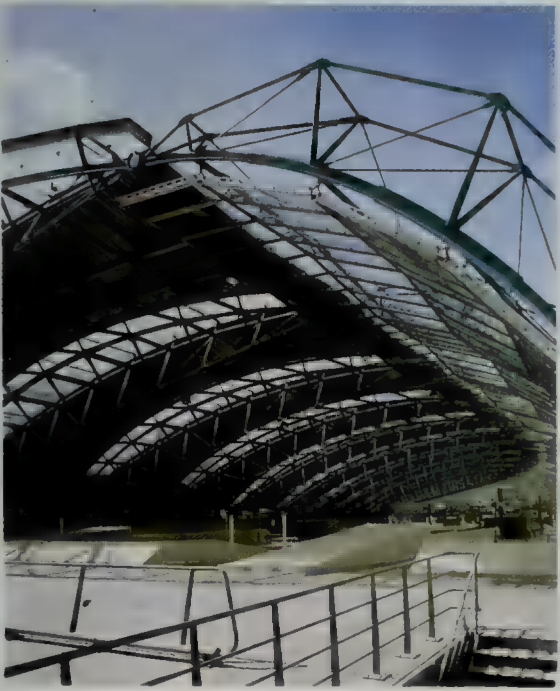
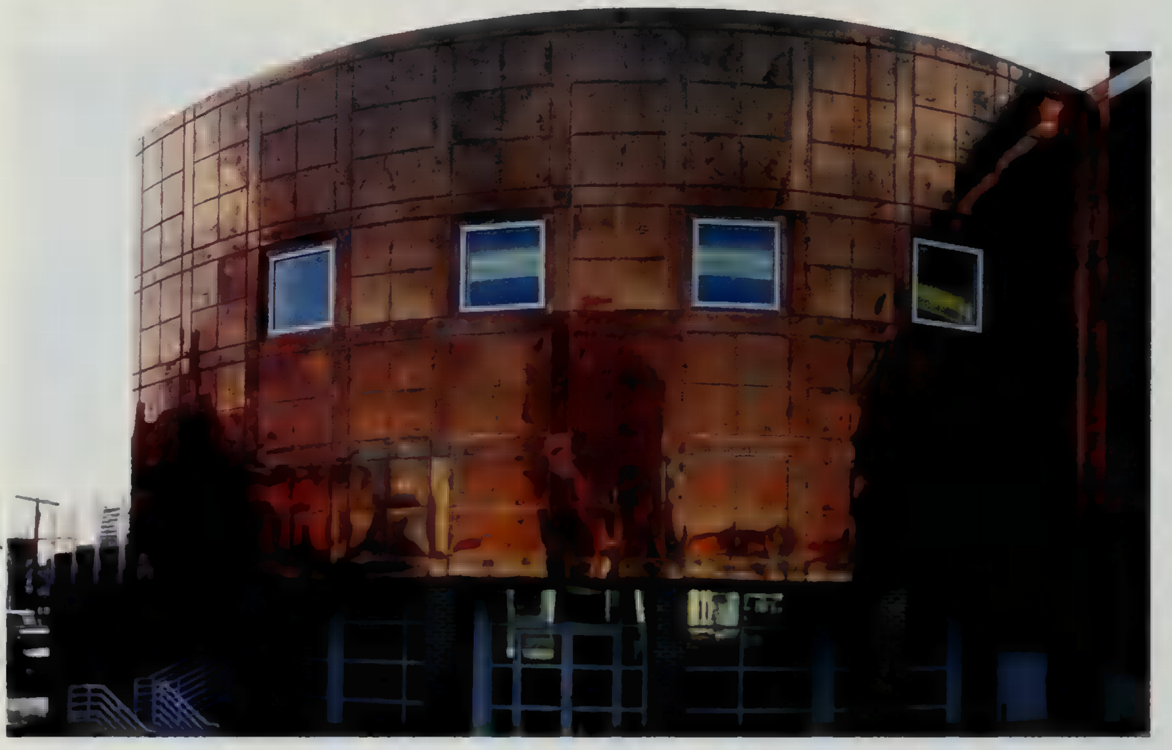


Photo courtesy of Quaternario Foundation

Some 800 architects, engineers, contractors, consultants, and construction-industry officials from around the world celebrated innovative technology in architecture at Quaternario '93, a symposium/awards program sponsored by Italian curtain-wall specialty contractor Permasteelisa Group and French cladding manufacturer Structal Europe. The International Award for Innovative Technology in Architecture (IAITA) went to Nicholas Grimshaw & Partners for Waterloo International Terminal, London (left); Maki and Associates for the Nippon Convention Center, Tokyo; Behnisch & Partners for the German Federal Parliament Building, Bonn; Forbes & Fitzhardinge for the CRA Advanced Technical Development Complex, Victoria, Australia; and Valode et Pistre & Associés for the L'Oréal Factory outside Paris. Tay Kheng Soon, partner in the Singapore firm of Akitek Tenggara II, called for "a new design culture based on ecological responsibility" using the latest technology. He illustrated his talk with drawings from a conceptual project called Tropical City, in which a team of Singapore architects explored ways to link ecology, architecture, and urban planning. Richard Rogers noted that buildings consume nearly 50 percent of all the energy used in the world, twice as much as transportation systems. In the future, he expects the skins of buildings will respond to environmental changes in much the same way as the skins of animals do, making buildings more efficient users of energy. Asked why no North American won an IAITA this year, Rogers, an IAITA juror, said, "Perhaps it is due to the clients and the economics in America, which don't allow the same kind of innovative approach to technology." *C. A. P.*

New Hampshire

Jewel-Box Addition, New Circulation Routes—and More to Come—for State's Only Law School


© Bruce T. Martin photo

The first phase of Elkus/Manfredi's renovation and expansion of New Hampshire's only law school, the Franklin Law Center, which specializes in the study of intellectual properties, includes a new curved copper-clad 15,000-sq-ft addition containing lecture hall, cafeteria, lounge, three classrooms, two seminar rooms, and a glassed-in atrium entry (not shown; the rear elevation, left, is the view from neighboring residences). "We studied all kinds of ways to preserve the copper color," says David Manfredi, "but became convinced it should weather." The first phase also involves a reconfigured circulation route between the existing building and the new entrance. Work to come will tackle 64,000-sq-ft of renovations in the older building, which had never been intended to serve as an educational facility. ■

Pennsylvania

Arts Center in 1920s Variety Hall

A town-and-gown campaign spearheaded by Pennsylvania College of Technology has succeeded in turning Williamsport's Capitol Theater into a community-arts center with an [illegible]-million restoration, technical upgrade, and expansion by Hayes Large Architects. ■

California

Down to the Sea in Redwood and Glass

The geophysics and planetary physics staff at the Scripps Institution of Oceanography was so enamored of its 1963 Lloyd Ruocco building that it selected Frederick Liebhardt, then of Liebhardt and Botton and a former apprentice to Ruocco and Frank Lloyd Wright, to design its new laboratory across the road in La Jolla. The multi-level complex, which features exposed redwood post-and-beam framing, flat roofs, full-height sliding windows in all east- and west-facing offices, and glass elevator shafts, opens up previously restricted ocean vistas. Resembling a well-bred vacation resort, it travels a 40-ft change of elevation, using circulation routes composed of open stairs, decks, and patios for convenient access between the pier level of the campus and the original hillside laboratories east of La Jolla Shores Drive. Robert Botton, who formed Robert Botton and Associates after Liebhardt's retirement, handled user-group contacts after the conceptual design, detailed project programming, project management, and detailing. But, he says, "There is no question: this is clearly a Fred Liebhardt building." ■

Design

Briefs

Quitting Time
Claiming he "strongly disagrees ethically and morally," Oswald Mathias Ungers has pulled out of Renzo Piano's Daimler-Benz project in Berlin's Potsdamer Platz [RECORD, November 1992, page 23]. Ungers calls his senior housing site on a narrow traffic-heavy route "irresponsible," and pans an enclosed shopping street he says will close at 7 p.m., shutting off Berlin's famed street life. He blames investor pressure for breaking with Berlin's "house-street-block-plaza" layout.

Alternative School
Stanley Tigerman and Eva Maddox's Archeworks Design Laboratory, an education and retraining facility with an admitted social agenda of improving society through work on projects that resist conventional market solutions, opens in Chicago in September. Archeworks will use R&D teams on projects initiated by community groups, commerce, government, and through competitions, and work toward satisfying NCARB/NCIDQ internship requirements. Semester tuition is $3,500. Applications, from students and professionals in transition, are due March 2; fax 312/644-3750.

Winners
Society of American Registered Architects Gold Ribbons have been awarded to Bermello, Ajamil for Miami's Riverside School; Carlson Associates for the Charles Schwab center in Phoenix; and Zivkovic Associates for the St. Mark's Bookstore interior in New York City.

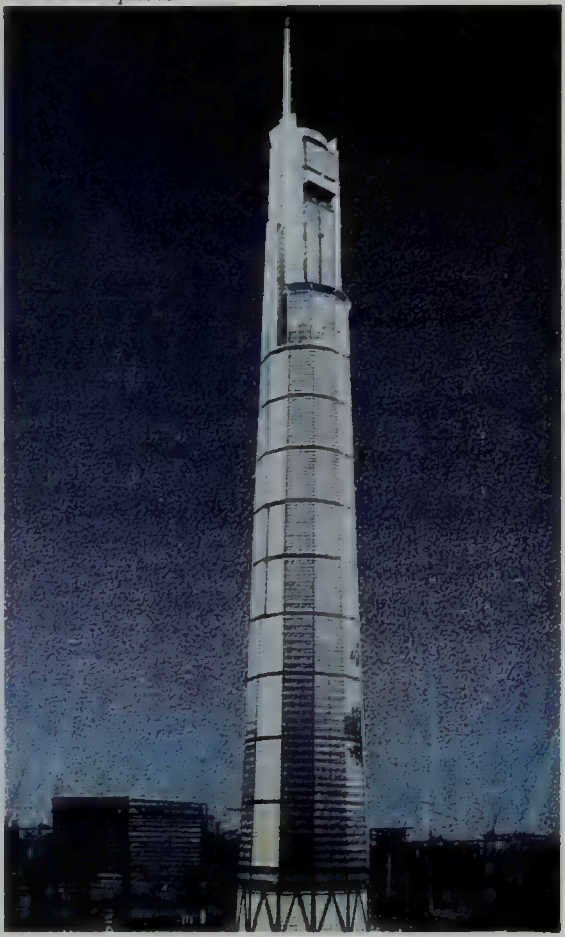
Memorial
Moore/Andersson is starting a fund to maintain the home of the late Charles W. Moore as a memorial and lodging for young architects working on area projects 512/476-5780.

Remembered
Arthur Holden died in Washington, Conn., Dec. 18, aged 103. Holden, a principal of several architecture firms since he first went into practice in 1920, had focused his long career on two areas of effort—housing, where his social, financial, and technical ideas were well ahead of their time—and housing finance. He had been the subject of a profile in RECORD's centennial issue [July 1991, page 174], and at the time attributed his longevity to "having something to do that's interesting." He had gone to his 81st Princeton reunion in June, and died of no particular ailment but old age. *S. A. K.*

China

Move Over, Sears Tower

John Back photo



Within the next four years, downtown Chongqing will become home to the tallest building in the world, a 1,500-ft office and hotel tower designed by Haines Lundberg Waehler to exceed the Sears Tower by 46 feet (excluding their antenna masts). Much of the design rhythm is expressed in increments of eight elements, the number being an invitation to prosperity in Chinese numerology: an eight-story public lobby; nine layers of eight-floor office segments punctuated by eight-story atria; a residential hotel with an eight-story lobby and observation deck, and, soaring above all that, 24 floors of single and duplex hotel units. The predominantly glass top section makes a deliberate reference to the temple forms that traditionally crown mountains in Chinese landscape paintings. In one of the best zoning stories heard in some time, the site carried a requirement that construction could not be under 100 stories (which HLW topped by another 14). Chongqing, with a metropolitan population of 12 million, is the capital of Sichuan Province, where the government plans to build the largest hydroelectric project in the world. ■

Massachusetts

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The Duo Dickinson design for Christ Lutheran Church in Southwick uses the site's existing slope to launch upward a projecting mass to remarkable views. The worship space, with a 450-seat main area and a 450-seat balcony, will focus on a most untraditional sanctuary: instead of an altar, there's an interior rock berm and tree cluster representing the Garden of Gethsemane and giving rise to a stream of water that will cascade down a side aisle for the length of the church. An 18-foot cross will hang in the apex of the progressively ascending roof. The entry will form a natural amphitheater for outdoor services, festivals, and performances. Plans include renovation of the existing church and construction of a multimedia "Magic Chapel" for children. Construction, to begin in 1998, is expected to culminate in Easter services in the year 2000. ■

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Wright on the Walls: Exhibiting a Legend

By Roger Kimball

Museum exhibitions of architecture are always curiously abstract affairs. How could it be otherwise? The main event—the buildings themselves—can be present only by evocation: in photographs, models, and descriptive essays. In some ways, it's like going to an exhibition of restaurants where instead of food one is presented with a series of carefully mounted menus, photographs of some delicious *soles farcies*, and the detailed accounts of gourmets recalling the great and disastrous meals of their youth. All very interesting and appetite-whetting, no doubt. But what time will lunch be served?

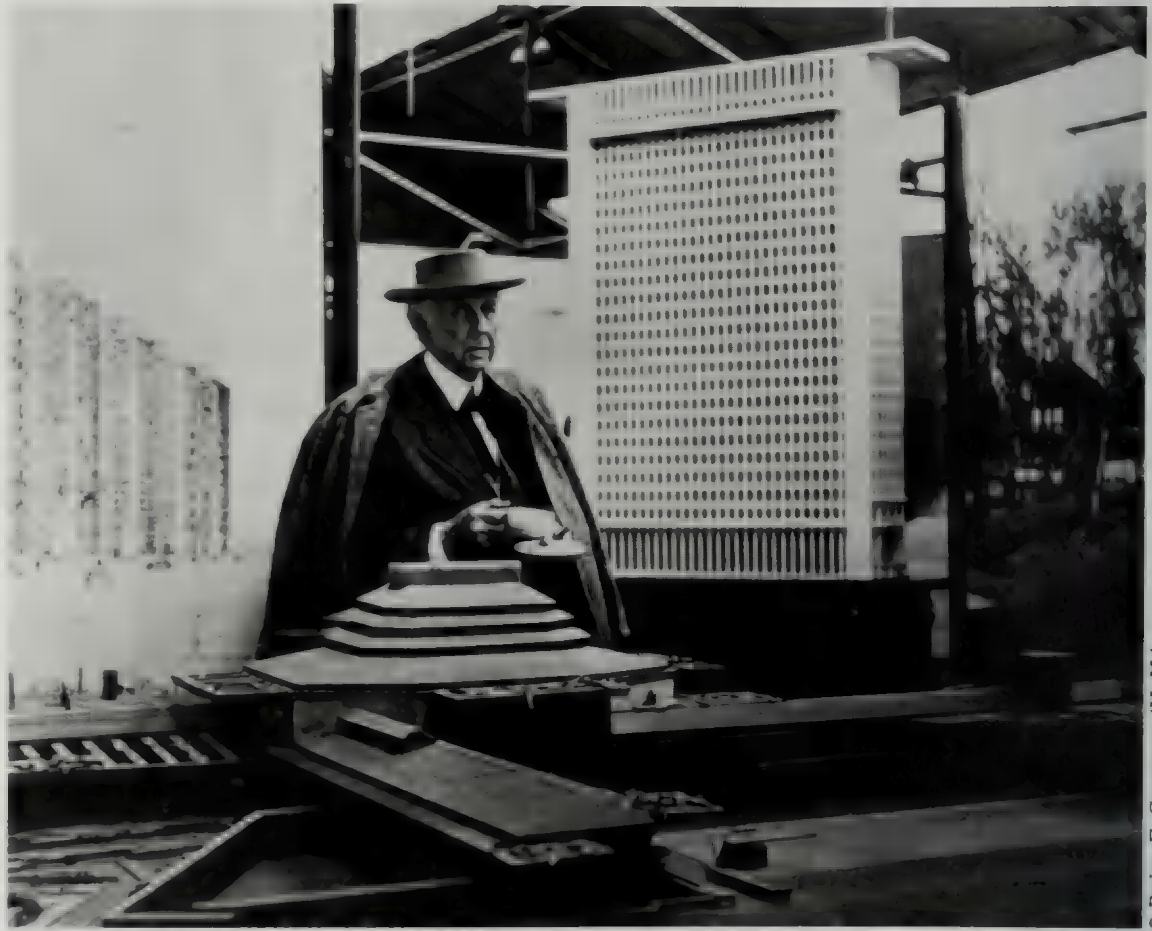
Exhibitions of architecture often inspire a similar impatience, leaving one to ask: where's the beef? Fortunately, this impatience is not the whole story. Indeed, some exhibitions of architecture can be positively transformative.

One thinks of the International Style show that Philip Johnson and Henry-Russell Hitchcock mounted at the Museum of Modern Art in 1932. That exhibition introduced an American audience—potential clients as well as architects—both to novel architectural forms and a whole new way of looking at the *tasks* of architecture. Its effect was to revolutionize architectural practice in the country and, indeed, around the world.

Of course, precious few exhibitions of architecture can have the seismic effect on the built environment that, at least indirectly, the Johnson-Hitchcock survey of International Style architecture did. This is a function not only of the potency of the available exhibitions but also of the propitiousness of the times. Only certain moments are ripe for such transformative intervention.

Yet plenty of exhibitions have helped change the course of contemporary thinking about architecture. Arthur Drexler's exhibition of [illegible] Arts architecture at MoMA in the [illegible] example, did a great deal to pave [illegible] triumph of Postmodernism [illegible] years.

Roger Kimball is managing editor of The New Criterion.



© Pedro E. Guerrero/MoMA

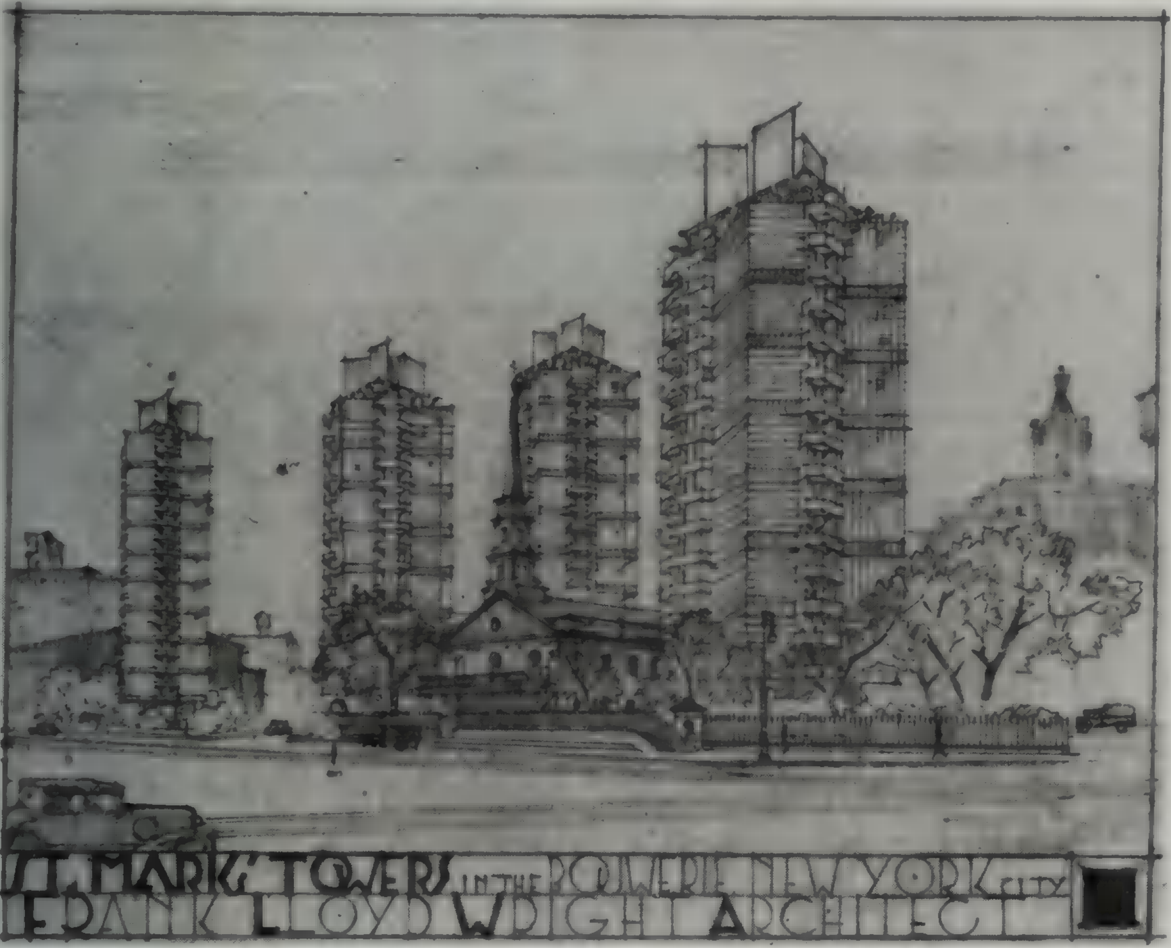
Frank Lloyd Wright in 1953 standing between models of the Herbert F. Johnson House ("Wingspread") and the Call Building project, which was designed for San Francisco.

Exhibitions focused on a single figure are perhaps less likely to have so conspicuous an influence, especially at a moment when there is little new building. But one can hope that the Museum of Modern Art's huge retrospective devoted to the work of Frank Lloyd Wright will have its own kind of galvanizing effect. On view at MoMA from February 20 through May 10, "Frank Lloyd Wright: Architect" will provide a good overview of Wright's vast body of work. Including hundreds of photographs, models, and drawings of some 85 built works and over 100 unbuilt projects (out of a total of about 1,000), the exhibition, organized by Terence Riley, chief curator in MoMA's department of architecture and design, offers a comprehensive introduction to the Wrightean esthetic.

There will, however, be few surprises. Most of Wright's distinctive achievement is already well known. Over the course of his long career (he lived from 1867 to 1959), Wright worked hard at becoming a celebrity and he succeeded grandly. Photographs of his signature buildings have been reproduced as widely as his famous slogans about the importance of "organic" architecture and the like. His innovations have been widely copied by other architects. His "sources"—the architecture of Louis Sullivan (with whom he apprenticed in the 1880s), Japanese domestic architecture, the English Arts and Crafts Movement, Viennese Secessionist architecture—have been as exhaustively documented as Wright's denials that he was influenced by anyone or anything. (The exception is Sullivan, Wright's *Lieber Meister*, whose influence Wright always generously acknowledged.)

Nevertheless, superficial familiarity is not the same as critical appreciation. And, as is often the case, the very familiarity of Wright's works and ideas has had the paradoxical effect of making it more difficult to grasp their originality. The promiscuous and often haphazard assimilation of his views has entailed a certain dilution. By stepping back

As the Museum of Modern Art opens a major retrospective on Frank Lloyd Wright this month, Roger Kimball wonders if there is anything new to learn about the master.


ST. MARK'S TOWERS IN THE BOUWERIE NEW YORK CITY
FRANK LLOYD WRIGHT ARCHITECT

© Frank Lloyd Wright Foundation/MoMA

Rendering of Wright's never-built design for apartment towers behind St. Mark's church in lower Manhattan, which influenced the design of the Price Tower in Oklahoma.

and looking afresh at Wright's whole career, this retrospective promises to help retrieve what is lasting in the legacy of America's greatest architect.

The hefty catalog that accompanies the exhibition is a testament both to the fertility of Wright's achievement and to some of the factors that make its appreciation difficult today. The five catalog essays range from William Cronon's thoughtful and informative examination of the esthetic and spiritual foundations of Wright's architectural vision to a typically hermetic meditation by Kenneth Frampton on (ostensibly) Wright and technology.

Unfortunately, the aroma of sycophancy and Wright-worship—something that the master encouraged in his students and followers—hangs heavy over some of the other essays. In a profession not distinguished for its modesty, the Wisconsin-born architect famously set a new standard for megalomania. When his recently completed Imperial Hotel in Tokyo (demolished in 1967) withstood a devastating earthquake in 1923, Wright reportedly went so far as to send himself a telegram, ostensibly from Japan, that read: HOTEL STANDS UNDAMAGED AS MONUMENT TO YOUR GENIUS HUNDREDS OF HOMELESS PROVIDED BY PERFECTLY MAINTAINED SERVICE CONGRATULATIONS.

Paul Rudolph's Concourse in Singapore recalls Wright's St. Mark's towers.

But of course egotism wasn't the whole story. Wright also set a new standard for architectural innovation and inventiveness. Few, if any, American architects have been as prolific. None has displayed his breathtaking originality or scope, his eager use of new materials and technologies, his spatial bravado. In a career that began in the early 1890s, he produced hundreds of designs for houses, churches, commercial buildings, furniture (most of which was decidedly *not* a success), monuments, and ornamentation.

Wright's work stands in 36 states across the country, and includes such landmark structures as the Solomon R. Guggenheim Museum in New York (completed in 1959 after Wright died), the Johnson Wax Building in Racine, Wis. (1939), and scores of houses from the Winslow House in River Forest, Ill. (1893) and Fallingwater in Bear Run, Pa. (1938), to the dozens of "Prairie" houses (which occupy suburbs, not prairies), "Usonian" houses, and unclassifiable concoctions such as the Hollyhock House, built in Los Angeles in the 1920s.

Of course, none of these buildings can be experienced fully from photographs or models. But when one subtracts first-hand experience from a Frank Lloyd Wright building, a lot is left behind: a fact that is a measure both of Wright's greatness and limitations as an architect. In fact, some of the experience of Wright's architecture is downright unpleasant. Mundane problems plague his buildings. They are too hot or too cold, notoriously difficult to service or repair, and on and on. Above all, they leak. All this—together with Wright's inveterate habit of going wildly over budget—made for strained relations with clients. One guesses that Wright's exchange with Hibbard Johnson was atypical only in its brevity: "Frank," Johnson telegrammed Wright in exasperation, "we're just sitting down to Thanksgiving dinner and your damned skylight is leaking. What are we to do?" Wright cabled back: "Move the table."

What made Wright a great architect was not engineering or prudence or (despite his high-flown talk about capital D-Democracy) civic-mindedness, but an extraordinary spatial imagination and a knack for siting buildings

Continued on page 19

Letters

Continued from page 4

surprised by the comments of Nancy Levinson, who seems to have reacted to, rather than reviewed, the monograph. Apparently antagonized by the word "theory," her points are haphazard. First, she suggests that the book's essays are not written in "clear English prose" and then—quoting me in her very next sentence—she chides me for my "disarming matter-of-factness." Unfortunately, my matter-of-factness did not prevent her from taking the quotation (from the first paragraph of the first essay) out of context and thus misconstruing the very premise of the book: contrary to what is implied in the review, the monograph proposes a distinction between "theory" and "criticism", the latter being a practice that involves practitioners and *evades* what I called "the present theory club." Perhaps her presumption that access to a chapter of theory requires "the linguistic equivalent of a secret handshake" dissuaded her from proceeding further into the book.

Admittedly, the monograph's design, like the work of Scogin, Elam and Bray and the essays on their work, is intended to be challenging, but there is no desire to be obscure or to exclude. In fact, the opposite is the case. I invite her to read further.

Mark Linder
Philadelphia

Nancy Levinson replies:

My comment about Mr. Linder's matter-of-factness refers not generally to his prose style but specifically to his description of contemporary academic theoreticians as constituting "the present theory club," of which, he continues, "I am a junior member." Regarding his distinction between theory and criticism, I would like to suggest, respectfully, that this kind of concern with nomenclature and classification is usually far more interesting to academics than to practitioners. In any case, I should note that the author's introductory essay, discussing this distinction, did not discourage me from "proceeding further." My review, or "reaction," was based upon reading the entire book.

Calendar

Continued from page 4

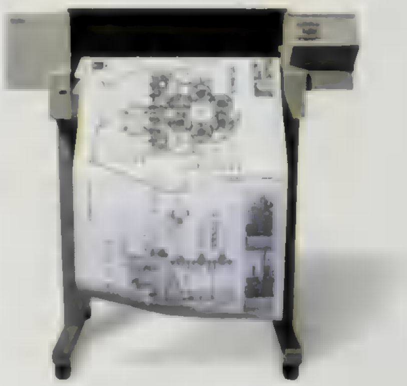
Architecture Students offers cash awards to students and interns in its Copper Technology Center Design Competition. Deadline: Spring, 1994. Call 202/626-7472.

- The Architectural League of New York announces its thirteenth annual Young Architects Competition. Participants must be not more than ten years out of architectural school. Deadline for entries is February 14, 1994. The Architectural League of New York, 457 Madison Avenue, New York, NY, 10022. (212) 753-1722.

- The American Hardboard Association is holding its "Home of the Year" competition. Deadline: February 14, 1994. For submission information, call 708/934-8800.

- International ideas competition for the reconstruction of the Souks of Beirut has been launched. First prize is $75,000 U. S. Deadline: February 15, 1994. Fax 212/444-8165 or call 212/478-3914.

- A November 1994 public housing forum to be held at the University of Cincinnati is now accepting abstracts for papers on this topic.



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- The National Institute for Architectural Education sponsors an essay contest. Five copies of an essay of 800-1,000 words is due Feb. 18. Call NIAE 212/924-7000 or fax 212/366-5836 for topic.

- A year of study and a two-year academic fellowship are to be awarded in a design competition being held by the Ove Arup Partnership. Deadline: Feb. 28. For more information contact "The Peter Rice Prize," 13 Fitzroy Street, London W1P 6BQ. Phone: 071-465-3553. Fax: 071-465-3666.

- Affordable Utah housing competition. $3,000 first prize; $2,000 second prize. Submit infill housing design appropriate to established Utah communities. Register by March 4. Deadline: May 13. ■

Observations

Continued from page 17

poetically in the surrounding landscape. These are Wright's most lasting contributions to architecture. They are also the things that Wright's students and followers have sought most assiduously to emulate.

But such things can not be emulated by imitating their outward forms. Friedrich Nietzsche wrote that a pupil repays a teacher poorly if he always remains nothing but a pupil. Wright's egomania required that his pupils remain in perpetual tutelage or suffer ostracism, which is why most of Wright's self-declared followers are little more than embarrassing epigones of the master. In his catalog essay, Cronon notes that for Wright, architecture should strive to imitate the principles of nature without imitating its forms. Wright took this advice when he assimilated the lessons of Sullivan and other influences without copying them.

This is something that few architects have managed. It is one thing to make a building that "looks like" or reminds one of a Frank Lloyd Wright building. It is quite another to design a building that exhibits the spatial ingenuity that Wright perfected. One of Wright's most distinguished heirs is Paul Rudolph (born in 1918), who coincidentally had exhibitions of his work at the Cooper-Hewitt Museum and the National Institute for Architectural Education in New York this winter. Anyone familiar with Rudolph's work—the Interdenominational Chapel in Tuskegee, Alabama, the Orange County Government Center in California, the Endo Laboratories in Garden City, New York, and the Art and Architecture Building at Yale University—knows that his buildings do not look like Wright's buildings any more than Wright's looked like those of Louis Sullivan.

Yet the critic who called Wright Paul Rudolph's "earliest and most lasting inspiration" was correct. Consider the complex arrangement of spaces in the Concourse, Rudolph's recently completed project in Singapore. With its swirling concrete forms the building is pure Rudolph, but the inspiration is quintessential Wright. If the ambitious retrospective at the Museum of Modern Art helps us to look at Wright with fresh eyes, the example of architects like Rudolph reminds us that his legacy continues to live on in contemporary architectural practice. ■

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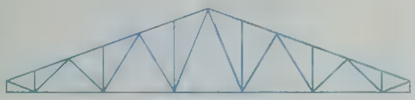

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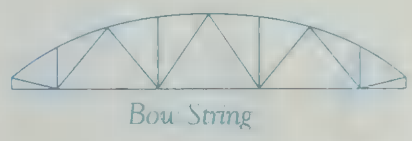

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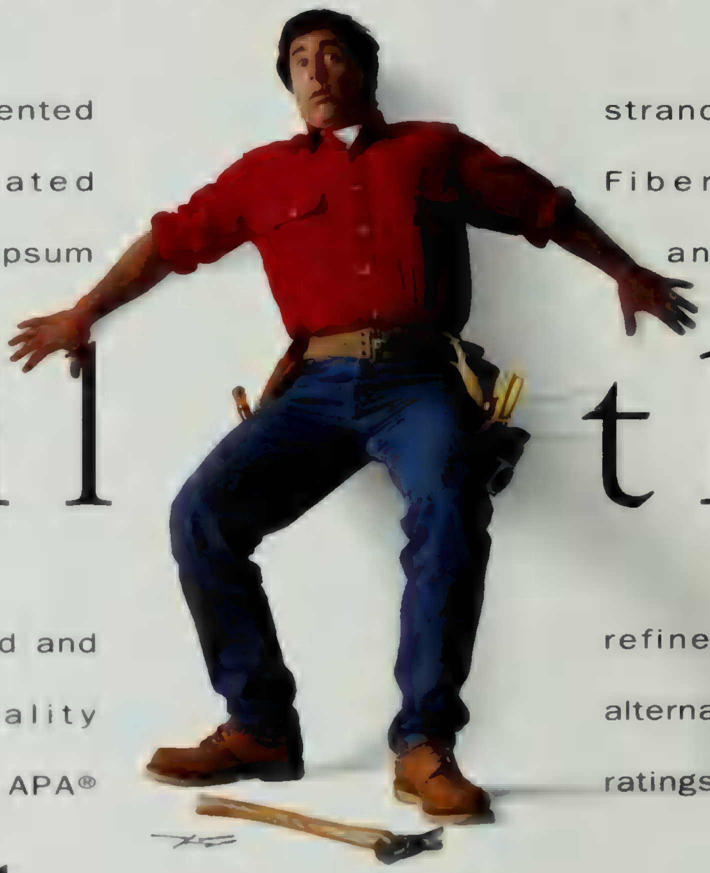

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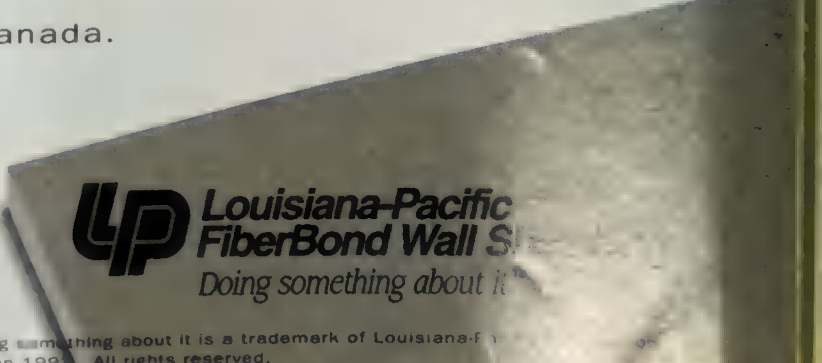

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Indicators

More small projects on the boards

The total dollar value of projects entering F. W. Dodge's reporting system continues to decline, though at a much lower rate than two years ago. Dodge, with architects' cooperation, is increasingly tracking projects at inception as a measure of the construction climate. The *number* of projects, however, rose 33 percent, suggesting that many more owners are commissioning work, even if in a tentative way: alterations outpaced new construction in many types. ■

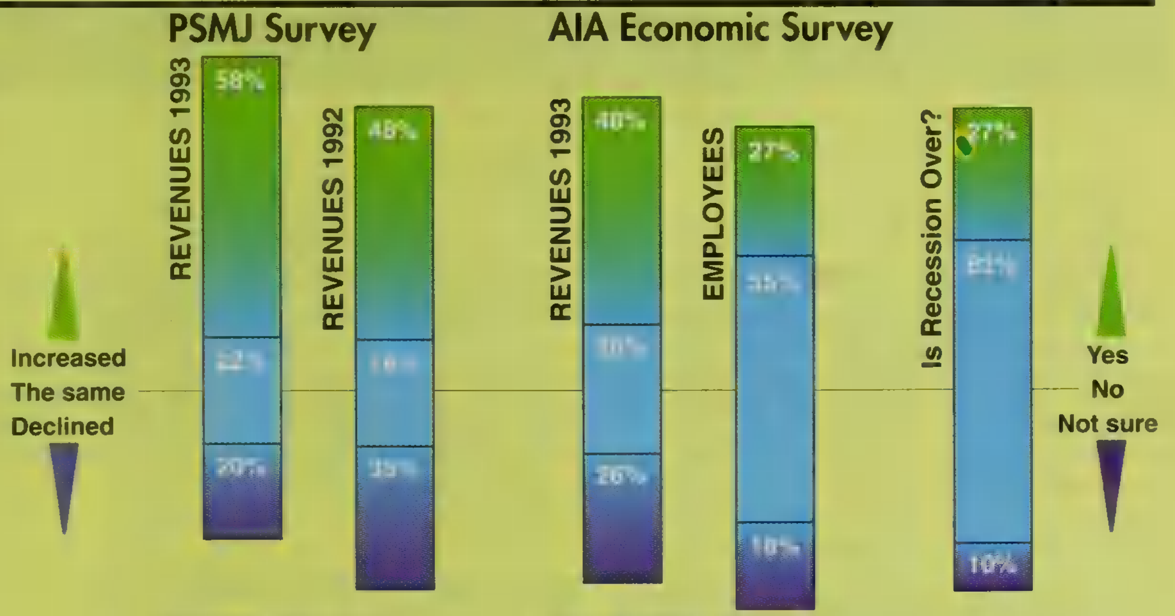
Projects in Planning, September 1993

	$Value (in millions)			Number of Projects	
NON–RESIDENTIAL	1992	1993	% CHANGE	NEW	ADDS/ALTS.
Commercial	$102,873	$79,349	22.8% ▼	7,775	4,430
Schools	57,447	55,368	3.6% ▼	4,861	8,535
Health Facilities	39,685	38,947	1.9% ▼	2,788	3,927
Leisure	36,785	38,275	4.0% ▲	3,496	2,332
Industrial	30,101	30,153	0.2% ▲	2,676	1,361
Transportation	23,057	22,822	1.0% ▼	2,007	993
Public Service Facilities	17,568	18,056	2.3% ▲	2,092	1,849
Religious Facilities	2,880	3,105	7.9% ▲	478	692
Military/Space Facilities	2,510	3,318	32.0% ▲	1,677	1,449
Animal/Fish/Plant Fac.	2,210	2,460	11.2% ▲	367	171
TOTAL NON–RESIDENTIAL	**$315,116**	**$291,854**	**7.5% ▼**	**28,217**	**25,739**
MULTI–RESIDENTIAL	**62,378**	**49,897**	**20.0% ▼**	**4,384**	**2,537**
GRAND TOTAL	**377,494**	**341,751**	**9.5% ▼**	**32,601**	**28,276**

Source: F.W. Dodge

Improved outlook for design firms

Two recent surveys suggest generally improved—though mixed—economic conditions for design firms. Compared to the previous year, the AIA's October 1993 poll shows lower confidence in business conditions and a slightly lower percent who feel that the recession has either ended or at least bottomed out. Still, most firms had either maintained staffing levels or added staff. Almost half the firms had increased billings over 1992; the increase for most was above 10 percent. The strongest regions were the West North Central, West South Central, and Mountain states. The Professional Services Management Journal's October/November survey also shows increased revenues, but it covers a broader spectrum of design firms. Though some sectors don't yet represent the strongest markets, they seem to be improving faster than others, said respondents, e. g., commercial work, housing, and light industry. ■



Best Building Types:
Education
Healthcare
Housing
Light Industry
Commercial
Government

Best Building Types:
Education
Healthcare
Commercial
S.F. Residential
Government
Institutional

The Profession This Month

- **Preservation's Vast New Horizons:** Industrial Heritage Corridors are a new way of looking at preservation and conservation. Architects can be key players. *Page 24*
- **Seismic and Landmarks:** Southern California's January earthquake gave renewed urgency to the search for earthquake-resisting improvements for older buildings. Preservationists hoped base isolation would prove less invasive. Does it live up to its billing? *Page 28*
- **Made For Multiple Platforms:** Intergraph's Microstation 5 is not only a powerful 2D/3D CAD package; it's ready for the multi-platform future. Software review, *Page 32*
- **Roof Accessories:** Our product report focuses on advanced roof scuttles and a versatile new roof window/door. *Page 34*

Preservation's Vast New Horizons

© Timothy Hursley photos

Typical of the Mon valley, the hulking Duquesne Works divides river and town.

By Nora Richter Greer and
James S. Russell

Along the rivers of southwestern Pennsylvania—the Allegheny, Youghiogheny, Monongahela, and Ohio—America's vast, once-mighty steelmaking complex pulsed. Now it has shrunk or moved to other places, taking economic vitality with it, and leaving behind hulking remains marooned on vast stretches of vacant, bulldozed lands. These massive ruins seem almost geologic: more in scale with the river and the hills than the neighborhoods of the valley towns whose views they block.

Now a broad coalition sees in these haunting remains the seeds of the steel towns' renewal, as well as an important heritage that merits preservation. Considering the enormity of southwestern Pennsylvania's steel-making, coal-extracting, and transportation complex, preservation here is, oddly, a race against time. The relentless wrecking ball has patiently eaten away at mills and [illegible] so vast they were once described [illegible] football fields, even miles.

[illegible] preservation task. "[illegible]" seems a feeble term when applied to these haunting and desolate, often mangled steel structures, let alone of the vast landscapes of which they are a part. Pennsylvania, however, has been the most successful state in marshaling federal and local resources to interpret these areas as industrial-heritage corridors, which seek to protect cultural, natural, and recreational resources of national significance that extend over a wide area.

Nora Richter Greer is a freelance writer based in Washington, D.C.

A regional approach to preservation

The heritage corridor concept exemplifies a significant, if not fully realized, shift toward regional conservation and planning, one that looks beyond individual artifacts or districts to an entire area's special sense of place. Architects have a role in assessing the historical value of artifacts, and designing interpretive sites and structures. And architects can do much more by entering the unfolding debate about what large-scale heritage areas can and cannot accomplish.

A good place to start is southwestern Pennsylvania, which has both a federally designated and a state-chartered heritage corridor. As the accompanying photographs show, it has artifacts of uncommon emotive power, but ones that don't easily lend themselves to conventional "park" or "museum" models. Heritage corridors are not new. The first was established by Congress in 1984 for the Illinois & Michigan Canal, which stretches some 150 miles southeast from Chicago. Currently there are only three other designated national heritage corridors: the Blackstone River Valley (Massachusetts and Rhode Island, which documents early industrial development), the Delaware & Lehigh Canal (eastern Pennsylvania) and the American Industrial Heritage Area (which covers nine counties east of Pittsburgh and focuses on a variety of industrial topics). "There must be 20 or 30 others in various stages of development," says Mary Means, a planner who is a board member of the National Coalition for Heritage Areas. "There's rampant interest at the grassroots level."

Overdoing "partnership"?

Legislation must be passed in the U. S. Congress to establish each corridor under the auspices of the National Park Service. Three states also have heritage-park systems. NPS provides funding to both state and federal entities for start-up and feasibility studies.

The federal government may also fund specific projects in a heritage area, most often in the form of a grant matching state, local, and private moneys. Legal protection for sites comes through local zoning and planning initiatives and designation of histor-

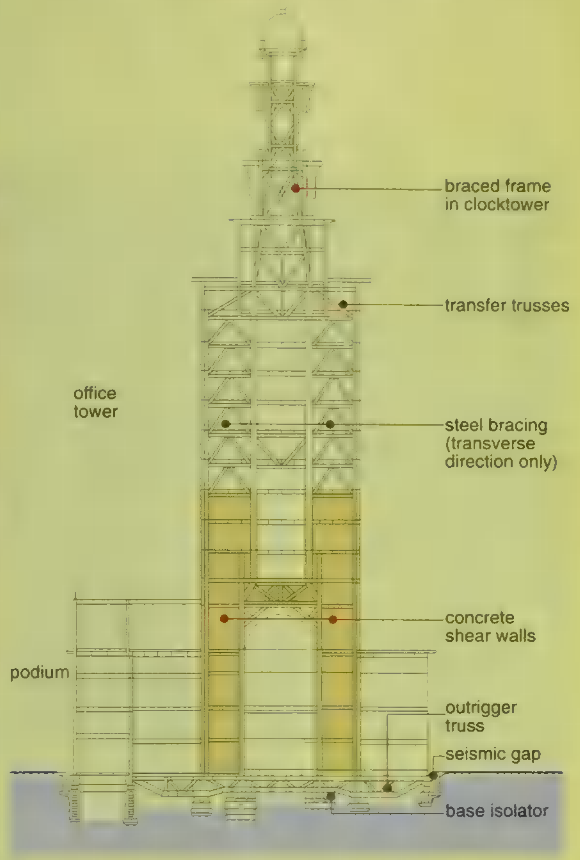
Although base isolation reduced the amount of stiffening required for the Oakland City Hall, the new bracing and shear walls needed were nevertheless significant (1, 2 below). Elastomeric bearings, because they are bolted to the frame (3), proved more appropriate for the structure, since they best reduce seismic uplift.

These trusses spread the uplift tendency from the relatively lightweight interior steel to the massive stonework perimeter. Above the trusses' eggcrate-like structure, new concrete shear walls extend to the sixth floor within the slender office tower.

As overseen by VBN Architects, Michael Willis & Associates, and Carey & Co., architects, this scheme includes some all-steel shear walls (less obtrusive than concrete), designed to keep open existing exterior windows that merited historic preservation. The retrofit also includes new steel chevron bracing along the weak axis of the 68- by 106-ft office tower from floors six through 12. A new steel braced frame resists the entire lateral load on the clocktower and a new horizontally braced diaphragm just below the 14th floor conveys these loads to the exterior walls of the office tower. Even with such extensive work, the engineers doubt that this 153,000-sq-ft building will escape a severe quake damage-free. They envision some yielding of the new steel braced frames in the office tower (not requiring structural repair), some reparable cracking of the office tower's perimeter walls, and some reparable damage to the clocktower's masonry. The retrofit should entirely safeguard the 52-ft-high podium, which contains most of the building's landmark interior spaces arranged around a three-story-high central rotunda. *D. B. R.*

© Douglas Symes

1



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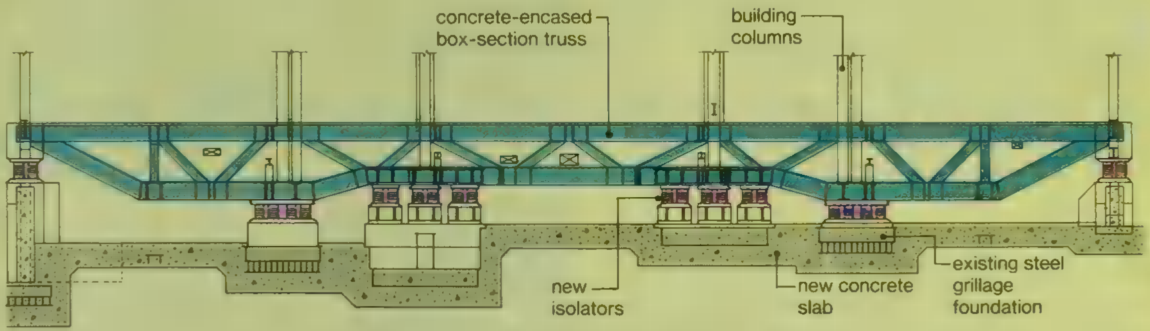
concrete-encased box-section truss
building columns
new isolators
new concrete slab
existing steel grillage foundation

TYPICAL TRUSS AND ISOLATORS AT BASEMENT

3

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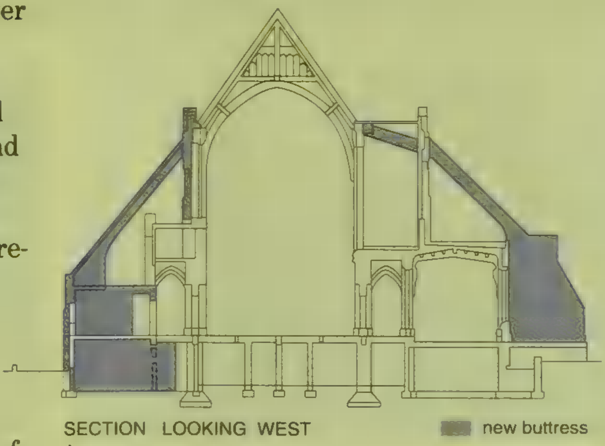
tresses (a Gothic detail the church had never had), which were refined by architect Esherick Homsey Dodge and Davis. The walls were further strengthened at critical points. The scheme locks the buttresses and walls together with a new 2-ft-sq concrete ring beam at the roof line, poured mostly from the outside. (The Dominican fathers rejected a bracing scheme that would have compromised the interior.)

More than $6 million of work remains undone in quake-proofing this 71-year-old church— most critically, the construction of additional wall reinforcing. Other churches, especially in low-income neighborhoods are worse off. *D. B. R.*



SECTION LOOKING WEST

4

Base isolation was not suited for St. Dominic's church, but local preservationists have accepted the addition of flying buttresses (where none previously existed).

5

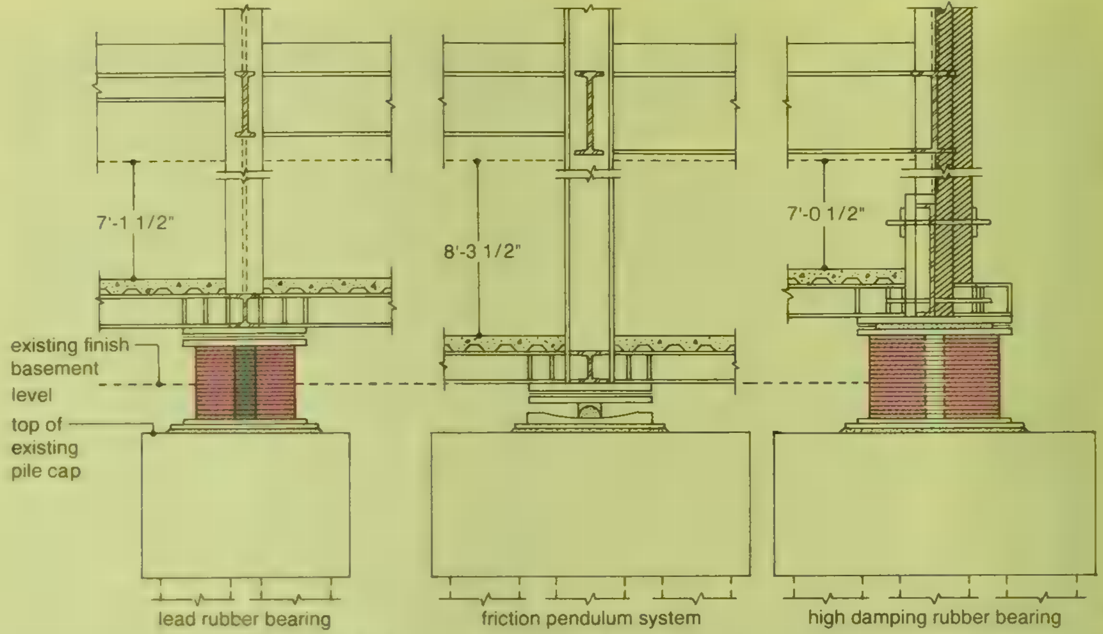
Friction pendulums were chosen at the U. S. Court of Appeals, in part because they freed a great deal more basement space than other types (6). Installation at the courtyard is shown (8).

U. S. Court of Appeals San Francisco

The federal government recently gave base isolation its imprimatur by installing the only American-made types—friction pendulums—under the largest and heaviest structure yet isolated: the 350,000-sq-ft U. S. Court of Appeals in San Francisco.

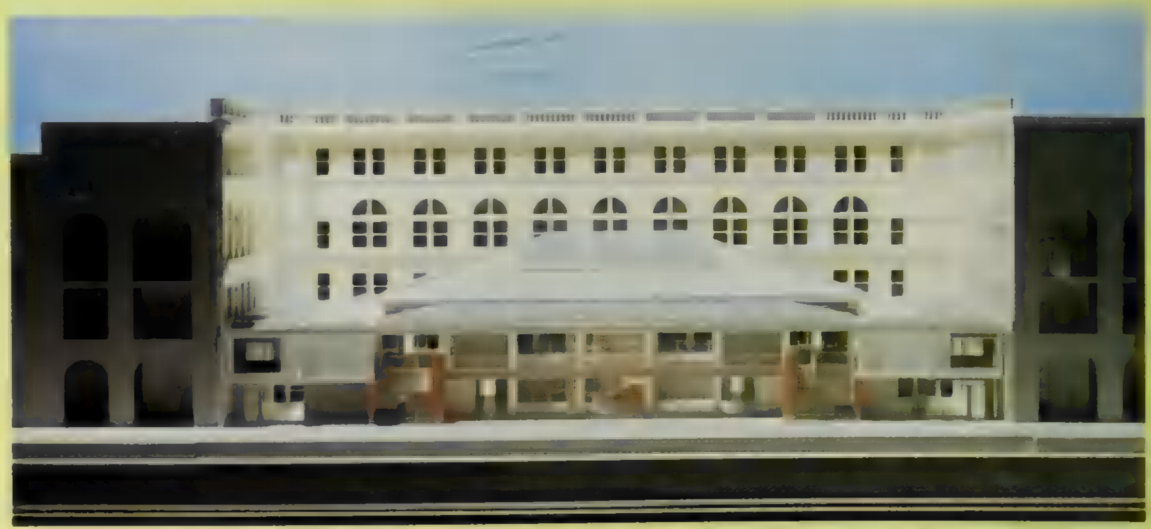
Not about to sink millions of dollars into a mere life-safety retrofit, GSA decided to make this courthouse virtually invulnerable to quakes, thereby protecting one of the finest examples of Beaux Arts architecture west of the Mississippi River. Marble mosaics decorate the barrel-vaulted suspended ceilings. Elaborate plaster moldings, marble wainscot panels, mosaic tiles, and intricate wood panels overlay hollow clay tile. According to an analysis by Forell/Elsesser Engineers Inc., the 1989 Loma Prieta quake pushed many of the four-story, 1905 building's structural elements to the limit, causing much cracking of the interior's hollow clay tiles and the exterior's unreinforced granite blocks.

Though elastomeric bearings were at one time proposed [RECORD, June 1991, pages 114-115], the friction-pendulum isolators specified represent, "an inherent fail-safe system," says Anoop S. Mokha, a structural engineer overseeing the work for architect/engineer Skidmore, Owings & Merrill. But they weren't enough. In the $83-million retrofit, new basement-level steel beams link the 256 isolated columns together (the columns have been reinforced for their lowest 12 ft). New concrete shear walls line the perimeter of the building's courtyard, and were added just inside the exterior walls' granite facings. Additional shear walls connect these inner and outer systems. The retrofit also includes replacement of a leaky two-story lightcourt in the central courtyard by a two-story-high atrium and mezzanine [illegible] (7, 9), which was designed to reduce [illegible] number of isolated columns needed. [illegible] around the perimeter will [illegible] the building from surrounding ground [illegible]. *D. B. R.*



BASEMENT CLEARANCE FOR THREE ISOLATION BEARING TYPES

6



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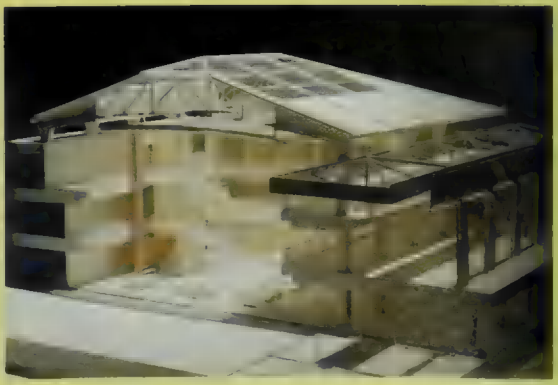

9

A new glass-roofed atrium [illegible] the focus of the restored building [illegible] X-bracing of the roof links the [illegible] shear walls of the existing [illegible] single system.

Shear walls were strategically placed in the Sheraton Palace (12) to avoid disturbing elaborate interior finishes, which were restored (11). The glass Palm Court roof (10) received minor strengthening.

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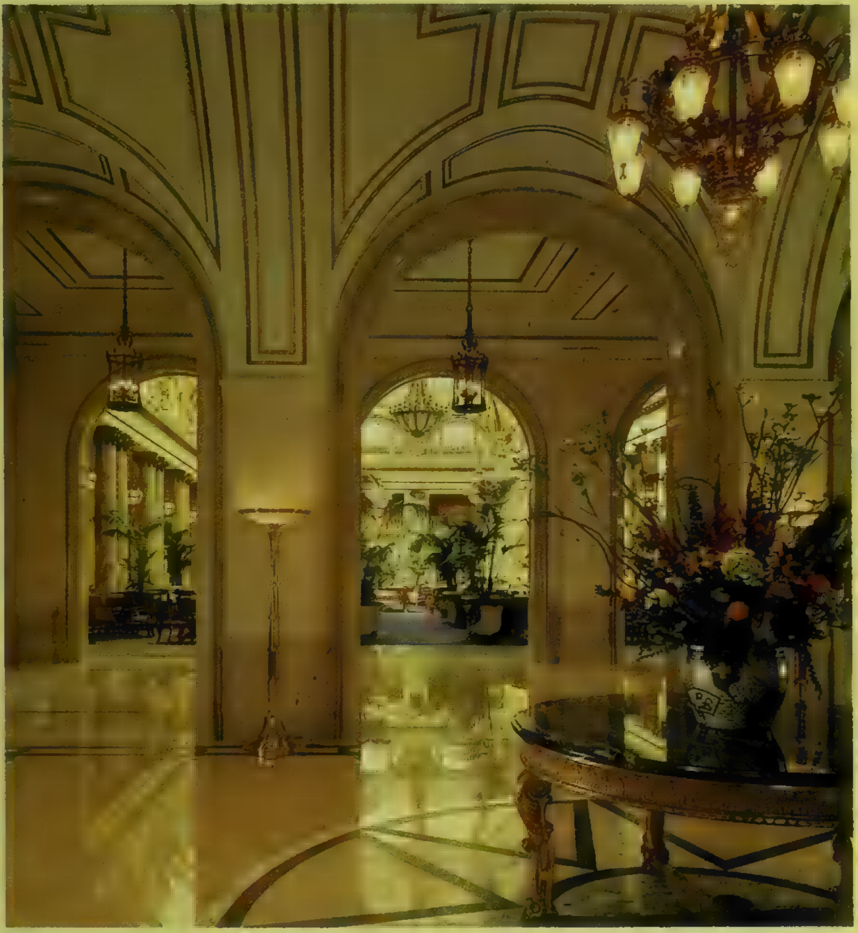
10



11

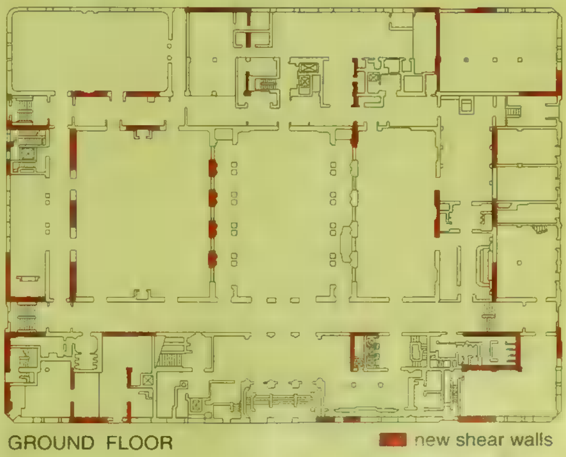
Sheraton Palace San Francisco

Reopened in April 1991 after a $150-million renovation, the 550-room Sheraton Palace Hotel in San Francisco received a "life-safety" seismic retrofit that leaves the building vulnerable to costly damage in a major earthquake. "It was a compromise strengthening scheme," says David R. Bonneville, vice president at H. J. Degenkolb Associates, San Francisco, seismic consultant to the local office of architect/engineer Skidmore Owings & Merrill. "It attacked the weakest links in the system."

San Francisco's building code merely requires seismic-resistant retrofits to buildings in the event of a change in the nature of the occupancy or alteration of two-thirds of the floors. That not being the case at the Sheraton Palace—with the exception of a four-story addition that qualified as new construction—the hotel's owner, the Honolulu office of Tokyo-based Kyo-ya Co. Ltd., considered an upgrade beyond code minimums to be too expensive.

Destroyed by fire in the the 1906 San Francisco earthquake, the hotel reopened in 1909 with a similar design. In its degree of architectural detail and ornateness, it's comparable to the U. S. Court of Appeals. Like the courthouse, the hotel features a steel frame with unreinforced masonry infill. The high, open interior spaces at the ground floor made the structure vulnerable as well. The owners committed to a complete renovation, including restoration of important historic elements such as the Palm Court skylight (top left). Unlike the courthouse, the hotel was not fitted with isolators when upgraded for cost reasons, but instead received new 36-ft-high concrete shear walls (plan right). Contractors also added reinforcing around stairwells.

The Loma Prieta earthquake struck 10 months into construction on the project. After the original brick infill sustained some damage during the quake, the owner agreed to extend shear walls the full nine-story height. Ultimately the hotel's restoration took 27 months. *D. B. R.*



12

13

Made For Multiple Platforms

Microstation 5

Vendor: Intergraph Corporation, Huntsville, Ala. 35894-0001 (800/345-4856), or Bentley Systems, 690 Pennsylvania Dr., Exton, Pa. 19341-1136, (610/458-5000).
Price: $3,790; Intergraph offers a variety of lower-cost upgrade plans for current users. Numerous support plans are available; basic support is $192/year for each U. S. license.
System: For DOS and Windows versions, the bare minimum is an 80386SX chip; 8MB RAM, and a math coprocessor. Consider nothing less than a fast 80486 system and 16MB RAM. For Windows NT and Intel CPUs, 16MB is also a bare minimum.
Storage: We highly recommend a CD-ROM drive. Complete MicroStation program files alone take over 70MB of fixed-disk space on DOS, Windows, or Windows NT.

It draws, it renders, it models. It's huge. It's the newest version of MicroStation. The name seems almost quaint; you'll need at least four grand of computer horsepower to run it, and even more to run it optimally. But let's face it, corralling the horses is the cheapest part of setting up a CAD seat. And once set up, MicroStation (with relative ease of network administration and slick new interface) looks fairly cheap to keep. The most noticeable change is in the interface—which is essentially identical in the DOS, Windows, and Windows NT versions.

As with Version 4, the default menus, dialog boxes, and command palettes have the look of OSF/Motif (an interface style usually associated with UNIX products). But the structure has been simplified, compared to Version 4. Major commands are grouped into palettes, and less-used commands into sub-palettes. All the grouping (fence) tools are in one place on a sub-palette, for instance. Some commands are set up more efficiently, with little dialog boxes used to set constraints. For convenience, menus stay put even when the left mouse button is released. You click, drag, click, rather than click, drag, drag.

Dialog boxes have a more consistent look than do standard Windows-style dialog boxes. Unlike Motif-style dialog boxes, however, double-clicking on a list choice invokes the choice. The result is an interface that Windows users have no trouble getting used to, and that requires little reorientation for those used to UNIX. (Windows users can change the style of the interface slightly—it can show up as Windows-white instead of Motif-gray—but placement of the command elements is identical.) You can also assign more commands to function keys—using the ALT and CTRL keys as well as the SHIFT key in combination, to increase the number of commands available this way.

You can customize the "workspace" in other ways—for a specific project or project type, for instance. An hvac retrofit might pull specific tools and palettes to the fore, compared with a landscape design. There's even an "AutoCAD Transition" workspace, and one for novices. AutoCAD users will also appreciate MicroStation's ability to read and write DWG (AutoCAD binary) files as well as DXF. Dialog boxes let you control the translations extremely well—even AutoCAD SHX (shape) files can be mapped to MicroStation fonts during DWG import. AutoCAD block attributes import—and are converted to—MicroStation element tags.

Nothing is perfect—many AutoCAD add-ons put attributes and other data in "undefined" areas of DWG and DXF files, and MicroStation's files have fewer allowable layers. But with some experimentation we achieved outstanding results, even with huge DWG files.

There's also import and export of IGES and CGM files, and export of files as raster images (for faster printing). You can save a rendered image at higher resolution and in

Perspective

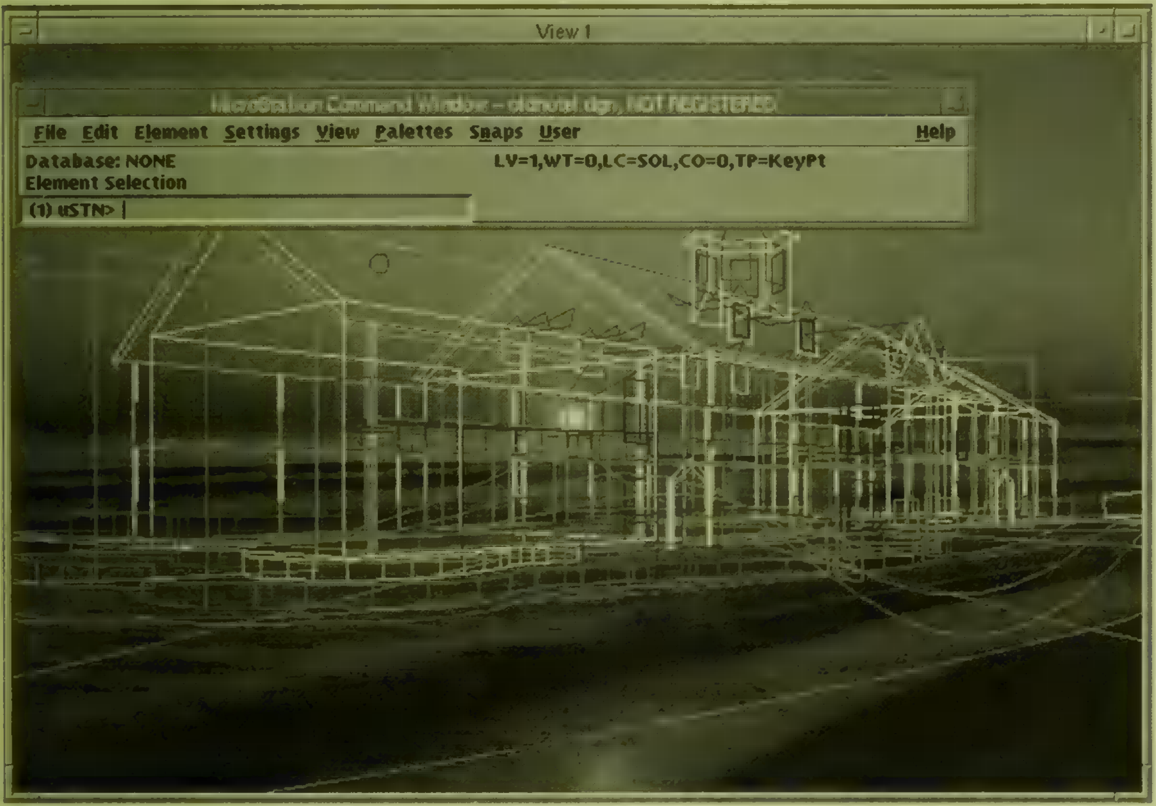
NT and Architects

Version 5 of MicroStation marks an important milestone in Intergraph's continuing transition from a hardware-software vendor to a company providing mainly software. One of the key elements making this transition possible is Windows NT, the new operating system from Microsoft. NT, despite its weaknesses (discussed below) is more than simply a super-capable operating system, a "better DOS." It allows vendors to offer software on more than one computer type. It allows different types of computers to coexist in an office. And it allows them to talk to one another almost seamlessly.

For Intergraph, NT provides a way to run essentially the same software on its Clipper workstations (formerly UNIX-only) as on [illegible] machines. An NT version for [illegible] is expected to ship by the end of [illegible] version for DEC Alpha [illegible] triple the speed [illegible] works as well. [illegible] MicroStation for [illegible] computers, and in addition is considering a PowerPC version. Architects are at the forefront of those who will be helped by NT. In fact, MicroStation 5 is literally the first really large NT application available in any field. CAD vendors—Autodesk, Intergraph, and most others—prepared for NT by releasing Windows 3.1 versions of their software. Architects want the power of NT, but few other professions seem ready for it, so it's not likely to be a total solution for architectural offices.

Although it looks about the same on-screen, NT is entirely different "under the hood." Microsoft promised an easy way for vendors to upgrade Windows 3.1 software to NT. It hasn't turned out that way; applications powerful enough to need NT are actually quite difficult to convert. Once converted to NT, applications have to be recompiled for different CPUs.

Instead, non-architectural software is leaning toward Windows 4.0 (code-named Cairo); it will probably sell 20 times as many copies as NT once it appears later in 1994. It will not be as versatile, but it will not require as big a computer, and has a nicer interface.
S. S. R.



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Element Selection
(1) uSTN> |
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Wireframe on bitmapped background. Note that Control panel floats.

more colors than you can display—or pull a quick screen capture. Control of lighting and surface textures for rendering is excellent.

Custom line styles are easy to create and easy to add to drawings. So are hatch patterns. The patterns now change shape if the area they represent is modified. You can also establish constraints on specific components—area-to-thickness ratio, or positioning with respect to other elements. Boolean operations have been combined with hatching tools; you can, say, subtract one shape from another to define an element

Plot preview is easy and accurate; MicroStation thus catches up to some competitors in this regard. Though setup is very easy, handling multiple types of printing and plotting equipment isn't. You either have to change MicroStation's configuration each time you change the output device, or output to a file and plot later. (Fancy network plotting utilities are an extra-cost option).

Out of the box, MicroStation comes with Structured Query Language (SQL) interfaces to dBase, FoxBase, and other "Xbase" data files (Oracle, Informix, and so forth). The basic Intergraph Relational Interface System is included, but the development tools for fancy custom searching and sorting applications cost extra. The approach with the included tools is brute force. Unlike the new Anaheim add-ons from Autodesk, MicroStation's built-in search tools won't preselect from a huge data set to create a more manageable pile of information to query. But it will combine many smaller data tables (that is, the system is truly "relational").

Network administration is outstanding. There's no more mechanical copy protection (it is replaced by a two-step registration and licensing procedure). Many offices will get by with simple "Windows" networking instead of hard-to-administer Novell, Banyan, and others. We were able to store files on an NT server from a terminal running Windows for Workgroups, for instance. The only constraint is to make sure the server stays running; software safeguards for the server are not as good as with (for instance) Novell, but smaller offices should get by.

In raw task-completion speed, the NT version runs a bit slowly for most jobs compared to the DOS/Windows version. But because NT allows MicroStation to work on more than one task at once, it will probably appear faster to most users.

All in all, MicroStation Version 5 combines excellent production-drafting tools with excellent visualization, 3D capabilities, and good 3D modeling. Intergraph has gone a long way to make AutoCAD users comfortable as well. MicroStation can now co-exist with AutoCAD in a large practice, or when many practices must collaborate.

The investment in equipment is high, but the base price of the software includes many items that are extras with other vendors. Training costs will be high (especially for offices new to MicroStation), but will probably be lower than training costs for comparable CAD products. Network administration costs should also be lower, especially if Windows NT becomes more prevalent. Thus, smaller practices (offices that can't afford the overhead of network wizards, for instance) should take a close look.

Manuals: The box is a lot smaller than the monster that came with earlier versions. In part this is due to a change in printing style. Nicely arranged page-edge indexed paperback reference and tutorial manuals replace bulky looseleaf ones. Just about all the documentation is available as on-line help.

Ease-of-use: This is the first version of MicroStation that our testers unanimously preferred to use with a mouse rather than by picking commands off a digitizing tablet.

Error-trapping: Outstanding with NT. Very good with DOS or Windows. One big issue: you must set translation parameters carefully when moving between MicroStation and AutoCAD DWG or DXF files, especially when referenced drawings are involved. *Steven S. Ross*

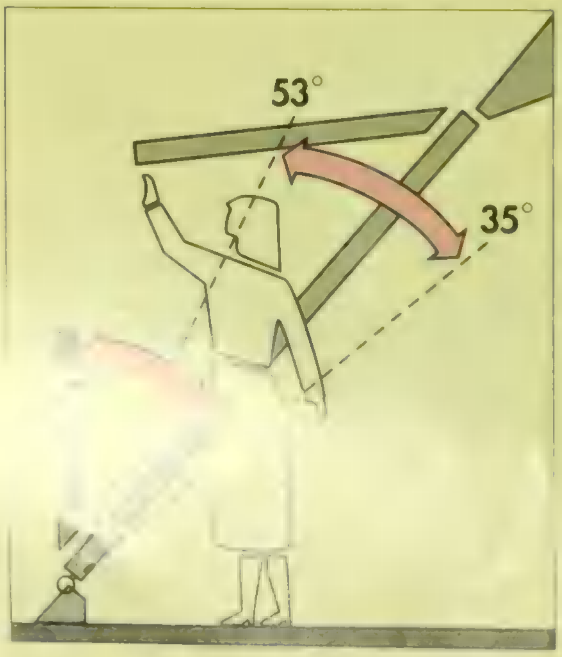
300 *on Reader Service Card*

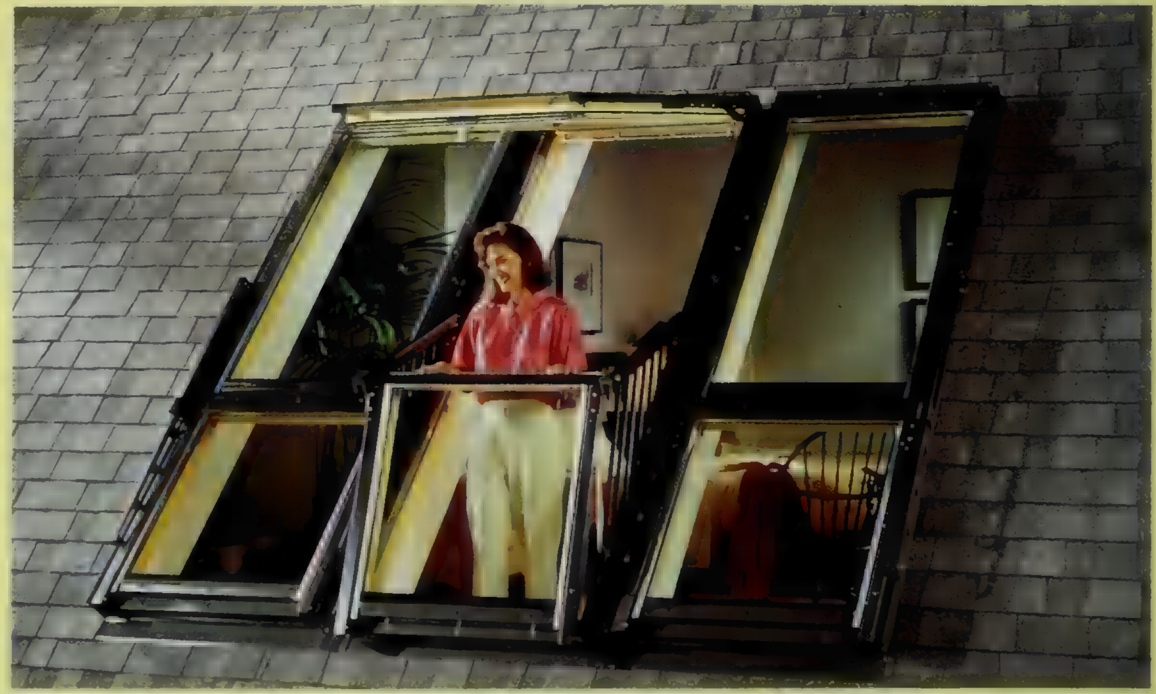
Through the Roof: Skylights and Scuttles

301. Up on the roof

The Cabrio balcony/roof window attracted a lot of attention when introduced to the American market last fall at The Remodelers Show. For installation in roofs with pitches of 35 to 53 degrees (diagram, below), where the bottom of the frame can be placed within an accessible 8- to 10 3/4-in. above the floor, the operable unit opens up attic-type spaces to a lot of daylight, and creates a step-out balcony that allows the user a panoramic view. Developed in Denmark and manufactured in Germany, the Cabrio design has been sold in Europe since 1992.

Closed, each 37-in.-wide, 100-in.-high unit resembles a double-hung window (b). Curbs and flashings can accommodate most roofing profiles, including shingles, shakes, and clay tile, and allow multiple units to be ganged together as pictured. To open the balcony, the user pushes the upper sash up and out, to a fully open position like an awning. Opening the lower section outward (a), causes side rails and uprights built into the exterior frame to slide into place, creating a secure enclosure that is said to meet most minimum-egress and balcony-code requirements (d). Each section can operate separately (c); the top sash pivots for cleaning. Glazing is laminated glass configured in a gas-filled, low-E IG unit. Sun-control and screening accessories are available; a single unit will list for $2,600. Velux-America, Inc., Greenwood, S. C.




a

b

c

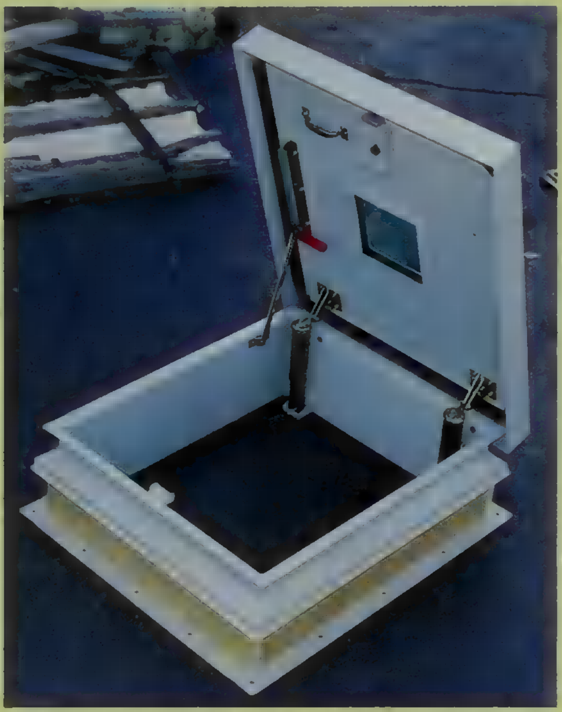
d

302. Hatchwork

A hatch is not a smoke vent, this 88-year-old firm points out to architects. Whereas a fire vent opens automatically at elevated temperatures, releasing superheated gasses to prevent flashover and clearing smoke for firefighters, the powerful springs, cables, and shock absorbers that help it work can make it hazardous as a personnel hatch. A scuttle or hatch is designed to give building personnel routine access to rooftop equipment without compromising security, energy-efficiency, or moisture resistance.

Recent advances in roof-hatch design have focused on improved weathertightness, and on creating a standard access-hatch line for special uses. These include high-security prison scuttles (photo (a) and section, lower right) constructed with heavy, 3/16-in.-thick steel plate. They can have a bullet-resistant view window, gunports, and detention-level locks. Hatches for metal roofs can be ordered with base-flange configurations that match specific roof-panel profiles (c). Installations in single-ply membrane roofs are made easier by what the company calls the Bilclip, an "easy-flashing" design that secures the roof membrane under the capflashing (shown (b) and detail below). Custom-use hatches remain a specialty. In addition to site-specific sizes, finishes, and materials (a copper hatch for a copper roof, say), hatches can meet unique functional requirements, such as a 42-in.-high louvered unit that houses laser canons for nightly light shows at Disney World's Epcot (d). Covers can hold heating cables that prevent snow buildup at ski resorts. And banks install radio-controlled scuttles that open on command to receive cash drops by helicopter. The Bilco Company, New Haven, Conn.

A further note on smoke vents: recently completed research by the Center for Fire Research (NIST), using computer simulations of fire conditions, has found that proper smoke venting enhances the performance of sprinkler systems by releasing smoke and gases and improving visibility. The NFPA 204M standard (smoke and heat venting) will incorporate this data, plus supporting full-scale fire tests that validate the computer model, as completed, in its next revision cycle.—J. F. B.



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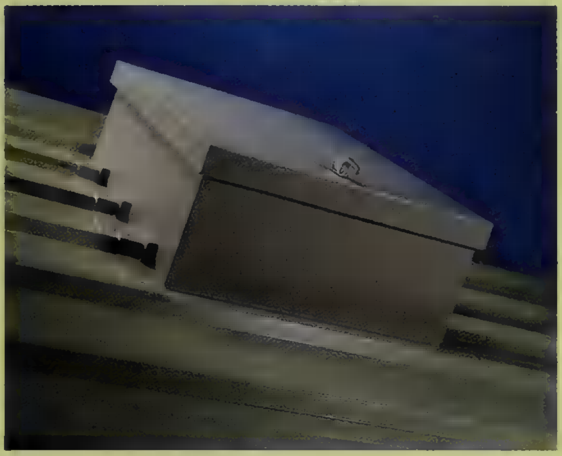

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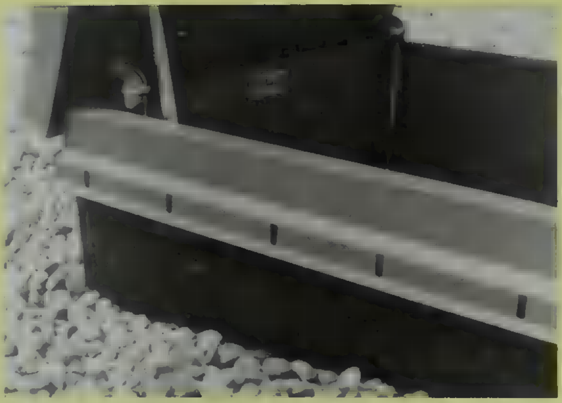

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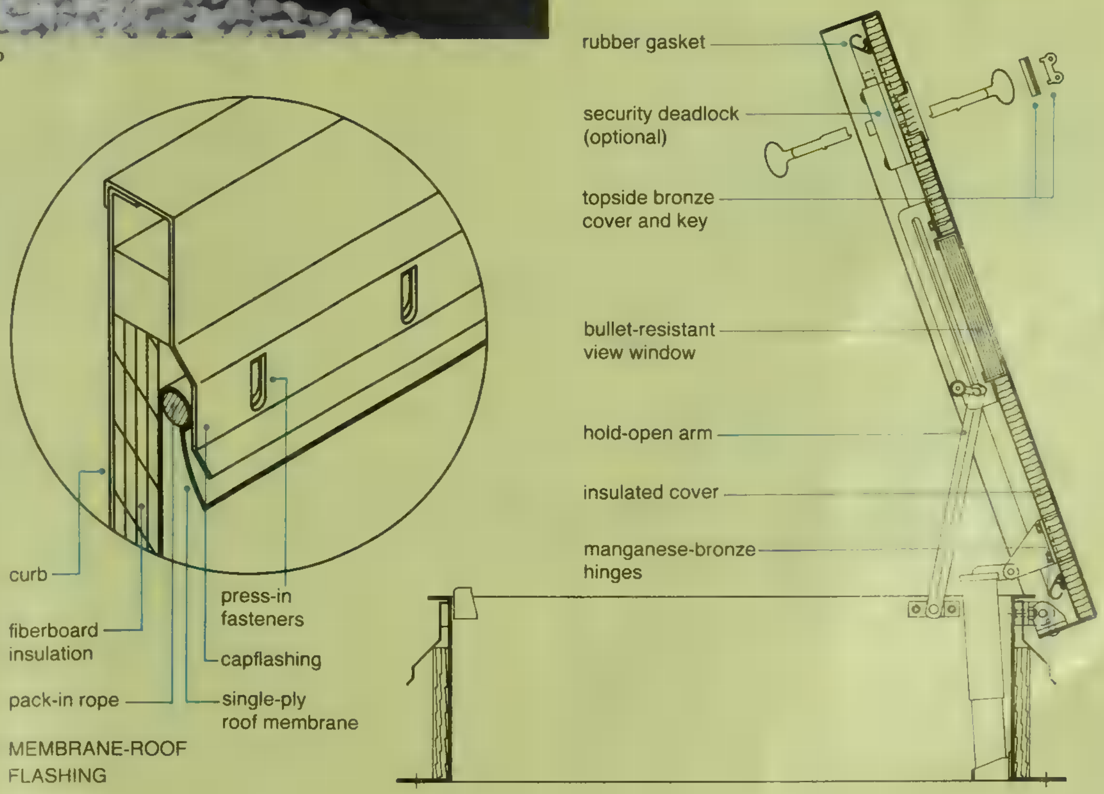


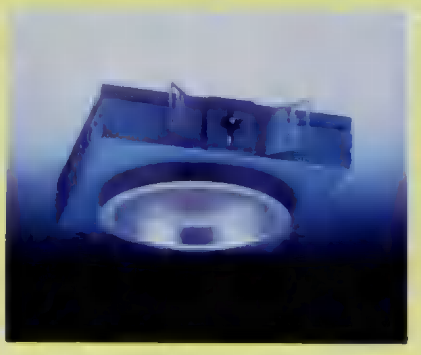
MEMBRANE-ROOF FLASHING

303. Finnish seating

A new source for furniture and accessories from Finland, located in the Pacific Design Center, showcases pieces like Kaarle Holmberg's Paletti chairs, sofas, and stools. Awarded a first prize by Finland's Interior Architects, the stackable, aluminum-framed side chair provides lumbar support for comfortable long-term seating. Design Finland, Inc., Los Angeles.

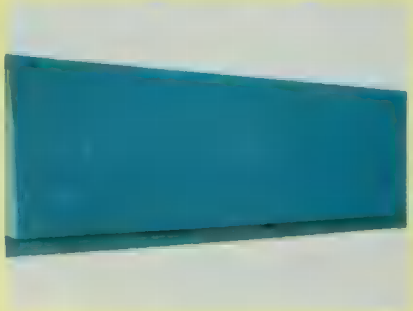
304. Concrete stains

Architectural-concrete paving can be chemically etched in any of eight mottled colors. The professionally applied solution of metallic salts reacts with old or new cement to form permanent, insoluble precipitates on the surface. For interior and exterior floors, stains can also be used on other cementitious and masonry surfaces such as porous tile. Bomanite Corp., Madera, Calif.



305. Lensed CFL downlight

Lenslux is said to be the first lensed compact-fluorescent downlight for the U. S. market, combining the wide light distribution and reduced contrast of a prismatic or milk-white diffuser with the energy savings of CFL sources. Features include regressed trim in six colors; wattages from 18 to 52; and housings as shallow as 3 1/16-in. Edison Price Lighting, New York City.



306. Wedge-profile base

A totally redesigned flooring accessory, TightLock pre-hung wall base has a recessed notch that hides the trimmed edges of carpeting. Available in rubber or vinyl, its wedge shape has the look of a toeless base and conceals gaps between drywall and subfloor. Base comes with a spacer that holds it off the floor for quick, professional-looking installation. Johnsonite, Chagrin Falls, Ohio.

307. Tight-radius wallboard

At only 1/4-in. thick, High-Flex gypsum board is flexible enough to accommodate the tight curves of stairways, arches, and columns without needing to be wetted or scored. Suitable for both inside or outside radii, the board has a tapered edge for quicker and neater joint finishing. Initial availability restricted to the West Coast. National Gypsum Co., Charlotte, N. C.

308. Modular coffer system

Hardwood ceilings can be furnished at only 20 percent of the installed cost of custom millwork, say the makers of a new system of snap-together prefinished components. The ceiling hangs on a standard suspended grid; options include laser-cut grilles (shown), custom sizes and woods, and a Class A rating. Free video demonstrates layouts. Wood Ceilings, Maryland Heights, Mo.

309. For porch or patio

Made of solid hardwood suitable for contract use indoors or out, the SunSled lounge can be ordered in a range of UV-shielding oil finishes or white enamel. A proprietary inking technology permits custom-print designs on the weather-resistant Sunbrella fabric upholstery of the cushions. Coordinating footrest, sofa, and dining furniture. Sloan & Associates, Lincoln, Neb.

310. Asymmetrical pedestals

Axel Enthoven basins come in two heights: standard 31 1/2-in., and a 35-in. height suited to taller users. Left- and right-hand basins can be set next to each other to create a matched suite, as shown, or placed on opposite walls. White only; countertop lav, bidet, and toilet offered in this design. Absolute, a Division of American Standard, Piscataway, N. J.

Short takes

- **Spare that tree.** Pella Corporation is sponsoring a nationwide series of day-long workshops intended to help architects and builders take advantage of existing tree stands on their project sites. Write for information to Building with Trees, 102 Main St., Pella, Iowa 50219.

- **Steel-frame initiative.** Aiming to [illegible] a bigger share of the residential construction market at the expense of wood studs and framing members (whose prices have been squeezed upward by supply pressures), the American Iron and Steel Institute showcased two steel-frame homes at January's National Association of Home Builders convention. A 5,191-sq-ft home was built for sale; a 1,350-sq-ft demonstration project was constructed in the Convention Center's parking lot.

- **Roofing-business swap.** Schuller International, maker of Manville roofing materials, has bought Owens-Corning's commercial and industrial roofing business. At the same time, the Denver-based firm is selling its residential-shingle product line to Owens-Corning.

- **Firestop empire.** A new marketing alliance unites 3M Corporation, a manufacturer of intumescent and endothermic through-penetration firestop materials, with Dow Corning. Under the contract terms, as of February 1 3M will market and sell Dow Corning's silicone-based firestopping sealants and foams exclusively in the U. S., creating a single vendor for a broad range of product for specific fire-safety code and performance requirements.

Rain Forest Rescue
The National Arbor Day Foundation

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IT'S HARD ENOUGH TO GET ONE ROOM AT THIS HISTORIC HOTEL. IMAGINE WHAT IT

Since 1875, the Sheraton Palace Hotel has been one of San Francisco's most beloved institutions. So when its restoration was being planned in 1989, every effort was made to preserve the details of its original design. Among other things, that meant the replacement of nearly 600 windows. And because of their experience in such projects, Marvin Windows and Doors was chosen. First to receive attention from Marvin and their local distributor were the hotel's graceful curved glass windows, an area in which Marvin's expertise is particularly well known.

No less of a challenge were the hotel's 585 aging double-hungs. Each demanded the same craftsmanship and attention to detail in order to maintain sightlines and replicate the historical profiles of the originals. And to guarantee their durability and consistency, each would have to incorporate the same performance features, too.

So Marvin suggested Magnum Tilt-Pac replacement sash, known for their strength, energy efficiency and economic advantages. And went on to propose glazing them with a special laminated glass to further insulate the rooms from the noise of the busy streets below.

In all, close to 600 windows in over 30 different sizes were designed and built to existing, historical

TOOK TO GET ALL 552 OF THEM.

standards. Including some of the largest Tilt-Pac replacement sash ever made. And as the sole supplier, Marvin was there from initial ordering to final installation to insure that the whole process went smoothly.

The Sheraton Palace Hotel reopened in April of 1991 after 27 months of painstaking restoration work. In part, because the hotel ordered room service for all 552 of its rooms. And Marvin delivered.

MAKE US YOUR FIRST CALL, NOT YOUR LAST RESORT.

If you've got a replacement or restoration project you want to discuss or a window problem you can't solve, call the one company you know will have the right solution. Call Marvin at **1-800-346-5128** (1-800-263-6161 in Canada). Or mail the coupon for a free catalog featuring our entire line of made-to-order windows and doors.

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Company

Address

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Zip Phone ( ) 1209402A

Please send me: ___ Commercial Catalog
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Sunbrella Firesist is available in 30 beautiful styles. Regular Sunbrella fabric is available in over 90. But beauty is only part of the story. Our fabrics are incredibly tough. They retain their colorfastness and strength for years, even under the most extreme conditions. They have superior water repellency characteristics too. And they resist damaging mildew and mold attacks. So it's no wonder we offer the best five-year limited warranty in the business.

And it's no wonder Sunbrella is the number one selling canvas fabric in America.

So look in the Yellow Pages under "Awnings & Canopies" for the name of a dealer near you. And start specifying Sunbrella, around the pool, and everywhere else too.

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Brite Vue's .050-thick stainless steel cladding alloy #304 or brass cladding alloy #280 Muntz Metal are systematically **(actually, it's easier to say that these are incredibly tough doors and despite the abuse they may receive, they'll always look great).**

The engineered balance of a 60/40 Muntz metal cladding composition generates a reflective hue that **(what we're trying to say is that each door radiates an extremely inviting, bright gold appearance).**

Brite Vue utilizes high-grade #8 mirror-polished stainless steel *(see inset)* engineered to **(the point is, our stainless steel is absent of the grainy lines found in cheaper materials).**

High Tech Landscape.

Through stringent in-house fabricating and tempering capabilities, Brite Vue **(it's simple, we fabricate, edge and temper the glass used in Brite Vue products, resulting in higher quality).**

Technically, this is an ad for Brite Vue Full-Framed Clad Doors.

But Brite Vue also manufactures a full line of frameless entrance systems, stacking, swinging, and specialty doors and an energy-efficient revolving door that's made to order. Each is designed and built to provide ultimate durability combined with aesthetic needs.

Every entrance need, every situation. Basically, Brite Vue.

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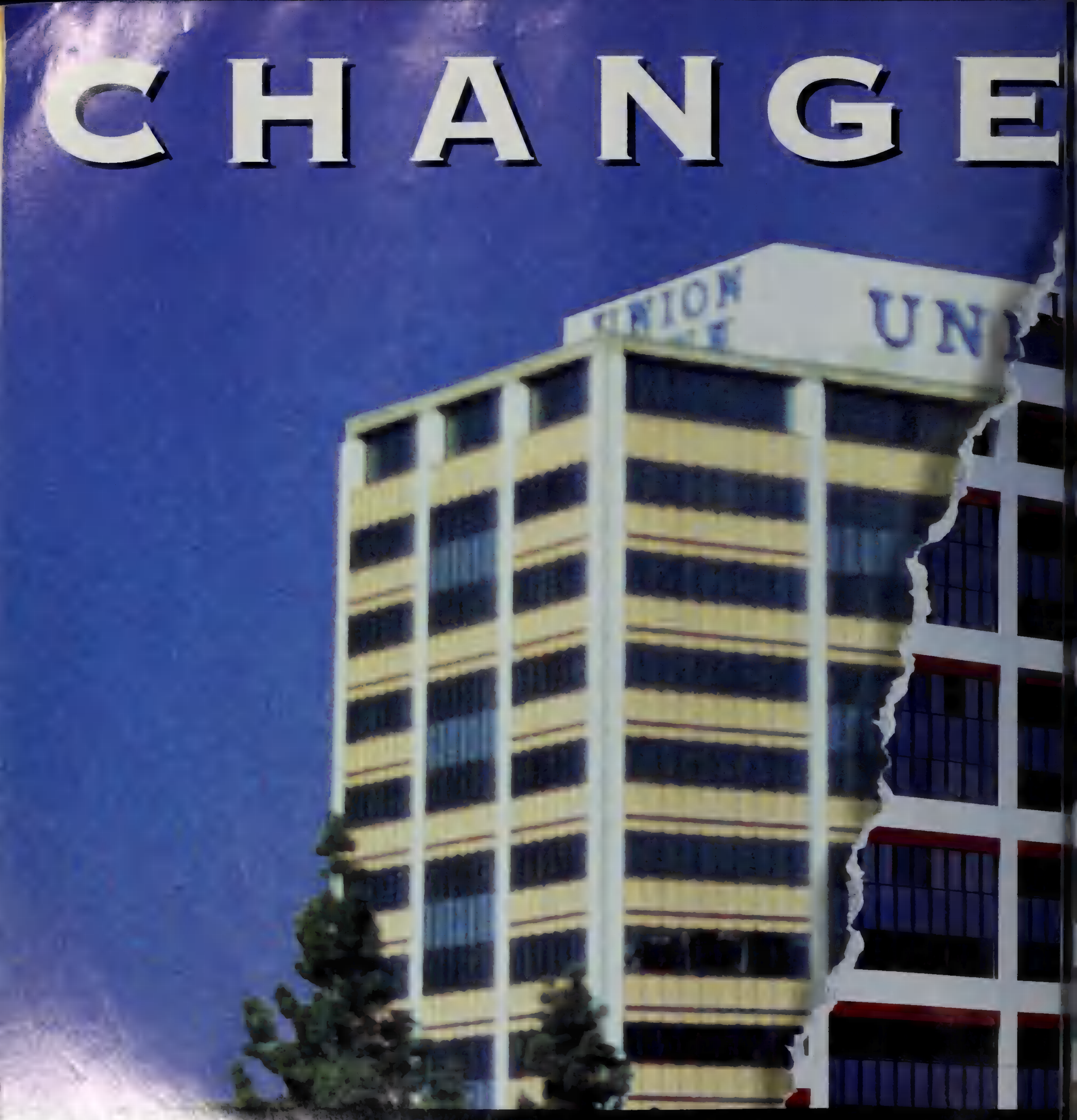

[illegible] you retrofit with Alucobond Material, the economical, flexible way to turn an outdated building into an ultramodern structure.

Installation is fast and easy. Alucobond Material goes right over the old exterior without the need to remove or pre-treat the existing building material. And with new, cost-efficient systems now available for attachment, it's even more affordable. Choose from a wide variety of standard colors and finishes. Or use our in-house, coil coating custom-color capabilities to add just the right color to restore or improve on a building's original beauty.

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Distributor: Elward, Inc., Lakewood, Colorado
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For more information about retrofit as well as new construction applications, call 1-800-382-6445 or 502-527-4200. Or write Alucobond Technologies, Incorporated, P.O. Box 507, Benton, KY 42025. And make a change for the better.

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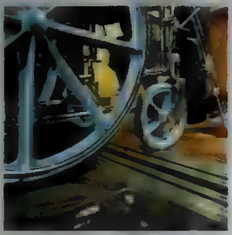
Dover creates equal opportunity elevators.

Dover makes elevators ADA-O.K.

Some elevators make life more difficult for people who are visually impaired and people in wheelchairs. But we make Dover elevators for all people. Every elevator we build today meets the requirements of the Americans with Disabilities Act. And we offer all the features needed to bring older elevators up to ADA standards.

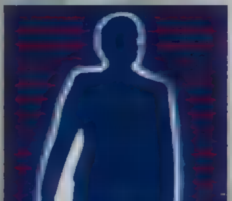
Signal fixtures anyone can read and reach.

Dover signal fixtures are placed so they can be easily reached by wheelchair occupants. Large raised call buttons include braille numbering. Audible floor indicators are also available.



Accurate, consistent floor leveling.

Microprocessor control systems give Dover elevators hit-the-mark precision. No misleveling to trip a visually impaired person or bump a wheelchair.



Door protection by super-sensitive light beams.

Also available from Dover is the MicroLight® Door Protection System, an invisible curtain of infrared light that detects any blockage and keeps the door from closing until it is clear. Unlike mechanical safety edges, contact is not required to stop the door.

Need help? Ask Dover.

We've been meeting special elevator requirements for more than 50 years. And that's why more people who buy elevators buy Dover, above all.

For free advice on how to make your present elevators ADA-O.K., call your local Dover representative. Or write Dover Elevator Systems, Inc., P. O. Box 2177, Memphis, TN 38101.

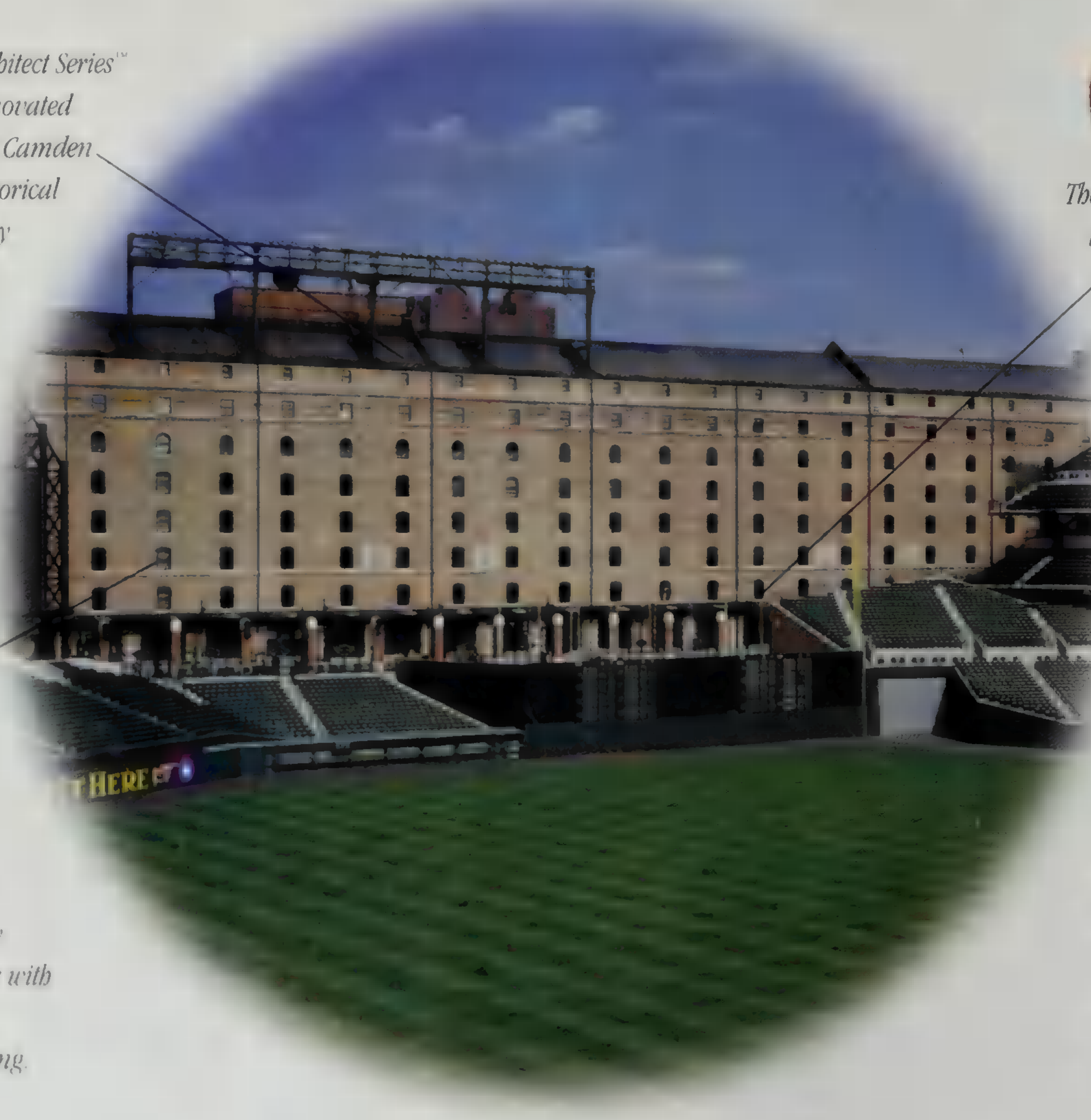
DOVER ELEVATORS

Dover. Above All.

ANOTHER REASON TO USE PELLA® WINDOWS

817 hits. No errors.

The 817 Pella® Architect Series™ windows in the renovated B&O Warehouse at Camden Yards combine historical authenticity, energy efficiency and low maintenance.



The architect specified tempered safety glass for windows within home-run range.

Only Pella could provide historically authentic windows with low-maintenance aluminum cladding.

Architect
HOK Sports Facilities Group

Contractor
Donohoe Construction

Owner
Maryland Stadium Authority

Few historical renovations have the exposure of the B&O Warehouse at Camden Yards in Baltimore. As the backdrop for a major sports facility, it's seen by millions nationwide. The owner and architect wanted windows with the authentic look of true divided light, on the outside and inside. They also required superior energy efficiency and low maintenance – all at a competitive price. Pella® Architect Series™ windows met all these criteria – 817 times over. Let the Pella Commercial Division provide innovative solutions for your window challenges. Call for our free Commercial Products Guide, or contact your local Pella Commercial Specialist.

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Quality like this only comes from Pella.

[illegible] is a [illegible]
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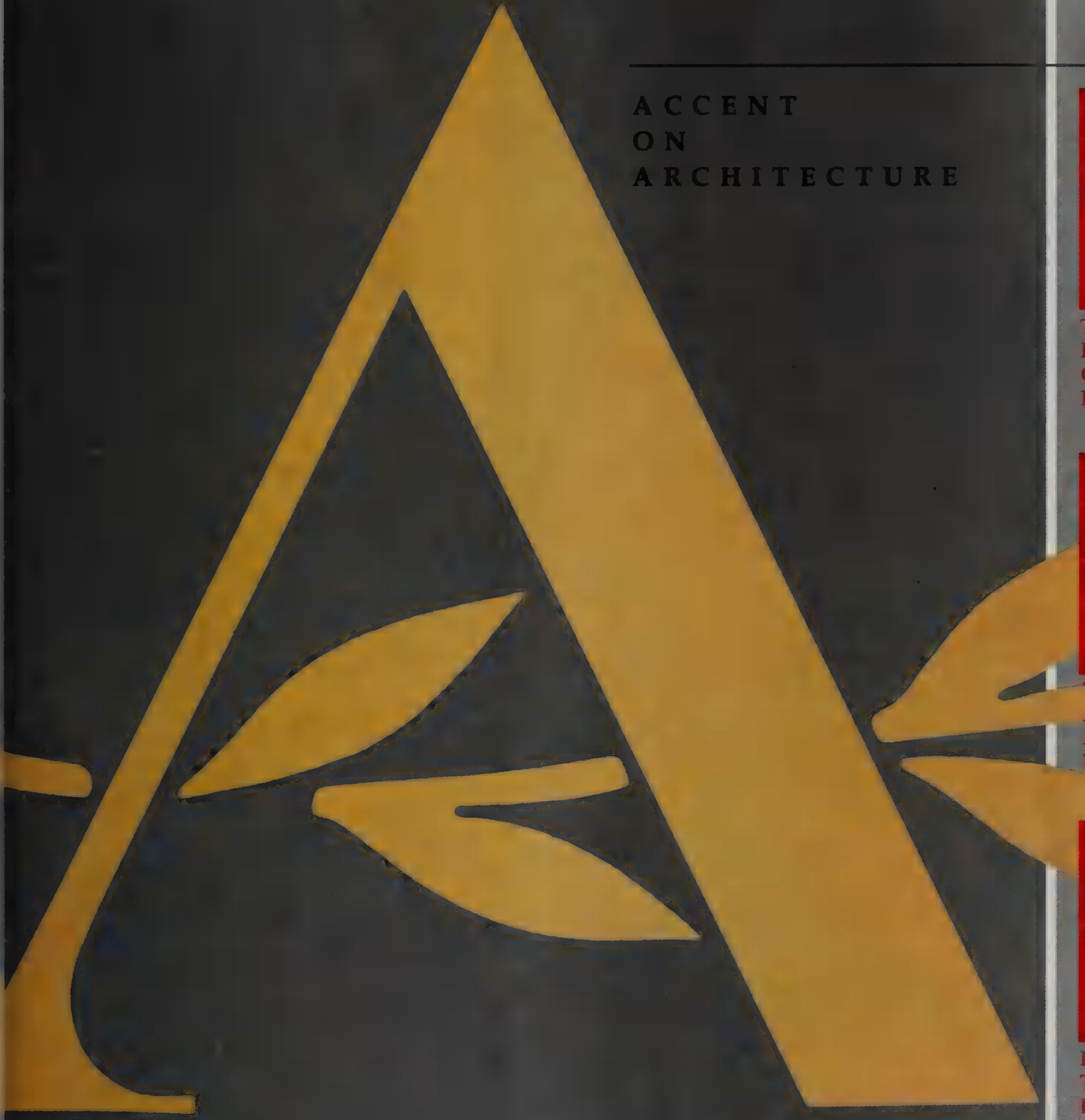

ACCENT ON ARCHITECTURE

A CELEBRATION OF DESIGN EXCELLENCE

THE AMERICAN INSTITUTE OF ARCHITECTS

THE AMERICAN ARCHITECTURAL FOUNDATION

THE AIA GOLD MEDAL

THE AIA GOLD MEDAL HONORING A LIFETIME OF CREATIVITY AND EXCELLENCE IN ARCHITECTURE

THE AIA TWENTY-FIVE YEAR AWARD

THE TWENTY-FIVE YEAR AWARD HONORING ARCHITECTURE THAT HAS WITHSTOOD THE TEST OF TIME

THE AIA HONOR AWARDS FOR ARCHITECTURE

HONOR AWARDS FOR ARCHITECTURE RECOGNIZING EXCELLENCE IN INDIVIDUAL BUILDING PROJECTS BY AMERICAN ARCHITECTS

THE AIA HONOR AWARDS FOR URBAN DESIGN

HONOR AWARDS FOR URBAN DESIGN HONORING PROJECTS AND PROGRAMS THAT CONTRIBUTE TO THE QUALITY OF URBAN ENVIRONMENTS

This awards section was developed as a public service to the building industry. Sponsors are listed on the next page. The awards section was distributed at the Accent on Architecture celebration held 1 February 1994 in Washington, D.C.

This awards section for the 1994 Accent on Architecture Awards Gala is made possible through the support of the following AIA/AAF Allied Members:

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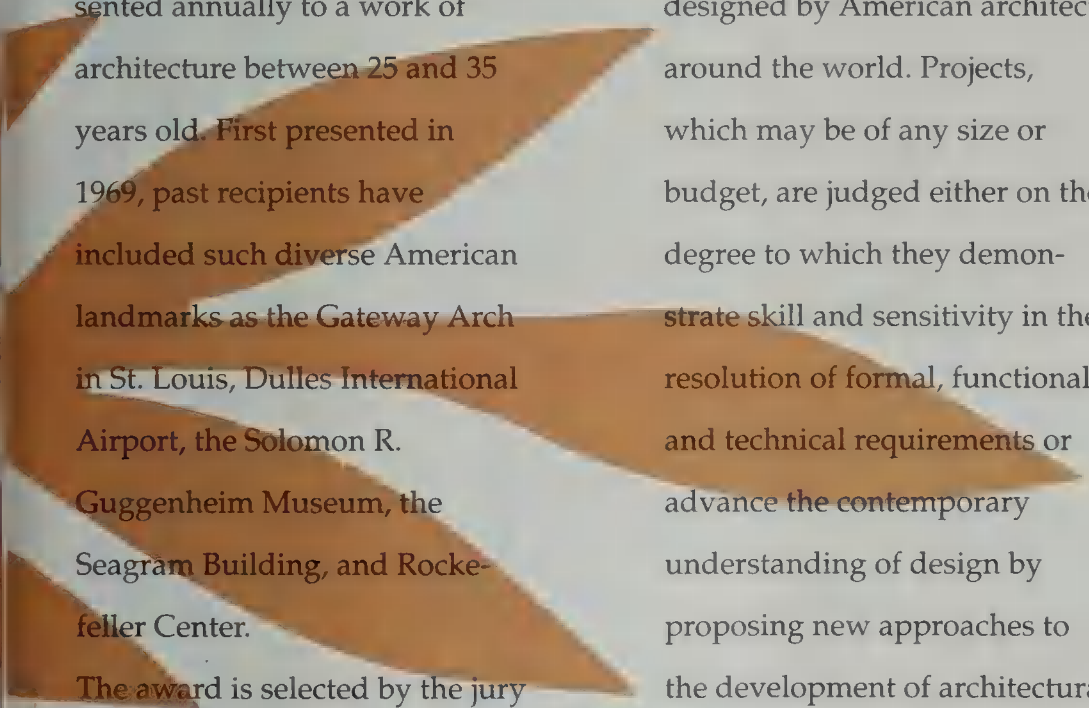
THE AIA GOLD MEDAL

HONORING A LIFETIME OF CREATIVY AND EXCELLENCE IN ARCHITECTURE

The Gold Medal is the highest honor The American Institute of Architects can bestow on an individual, recognizing a lifetime of distinguished achievement. It was first conferred in 1907 and has been awarded to many of the most important architects of the 20th century. Five presidents of the United States have participated in Gold Medal ceremonies, including, in recent years, presidents Bush and Clinton. Honorees are selected by the AIA Board of Directors and require a three-fourths vote for election. Otherwise, no medal is awarded. Sir Norman Foster, Hon. FAIA, FRIBA, is the 52nd person to receive the award in its 87-year history and the 12th whose practice has been primarily abroad.

THE AIA TWENTY-FIVE YEAR AWARD

HONORING ARCHITECTURE THAT HAS WITHSTOOD THE TEST OF TIME



Created to celebrate the enduring nature of quality design, the Twenty-Five Year Award is presented annually to a work of architecture between 25 and 35 years old. First presented in 1969, past recipients have included such diverse American landmarks as the Gateway Arch in St. Louis, Dulles International Airport, the Solomon R. Guggenheim Museum, the Seagram Building, and Rockefeller Center.

The award is selected by the jury for the Honor Awards for Architecture.

THE AIA HONOR AWARDS FOR ARCHITECTURE

RECOGNIZING EXCELLENCE IN INDIVIDUAL BUILDING PROJECTS BY AMERICAN ARCHITECTS

Each year since 1949, the Honor Awards program has celebrated outstanding architecture designed by American architects around the world. Projects, which may be of any size or budget, are judged either on the degree to which they demonstrate skill and sensitivity in the resolution of formal, functional, and technical requirements or advance the contemporary understanding of design by proposing new approaches to the development of architectural form.

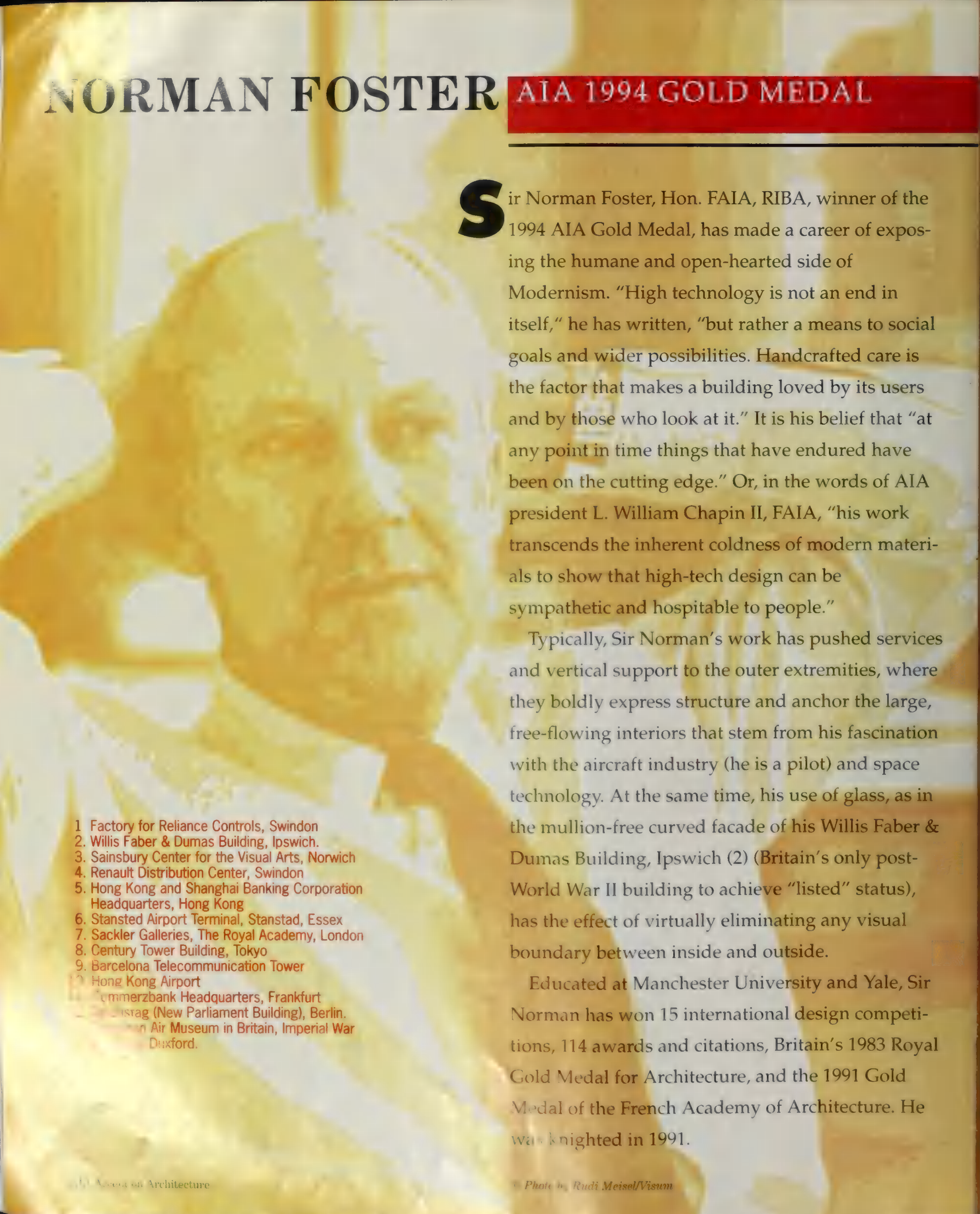
The 1994 jury includes:
Donlyn Lyndon, FAIA, chairman
Ted Flato, AIA
Raymond Gindroz, AIA
Jan Abell, AIA
Peter van Dijk, FAIA
Betsy West, Assoc. AIA
Adele Chatfield-Taylor, American Academy in Rome
Robert A. Barthelman, student, Kent State Univ.
Magali Sarfatti Larson, PhD., Temple University

THE AIA HONOR AWARDS FOR URBAN DESIGN

HONORING PROJECTS AND PROGRAMS THAT CONTRIBUTE TO THE QUALITY OF URBAN ENVIRONMENTS

The Honor Awards for Urban Design recognize the expanding role of the architect in urban design, city planning, and community development. Urban design projects, public planning programs, civic improvements, environmental programs, and redevelopment projects are eligible. The awards honor projects that employ an effective community process to enhance the urban fabric and encourage a celebration of urban life for an entire neighborhood, city, or region.

The 1994 jury includes:
Jonathan Barnett, FAIA, chairman
Peter Zweig, FAIA
Mayor Dorothy Inman Crews, Tallahassee., Fla.



NORMAN FOSTER

AIA 1994 GOLD MEDAL

Sir Norman Foster, Hon. FAIA, RIBA, winner of the 1994 AIA Gold Medal, has made a career of exposing the humane and open-hearted side of Modernism. "High technology is not an end in itself," he has written, "but rather a means to social goals and wider possibilities. Handcrafted care is the factor that makes a building loved by its users and by those who look at it." It is his belief that "at any point in time things that have endured have been on the cutting edge." Or, in the words of AIA president L. William Chapin II, FAIA, "his work transcends the inherent coldness of modern materials to show that high-tech design can be sympathetic and hospitable to people."

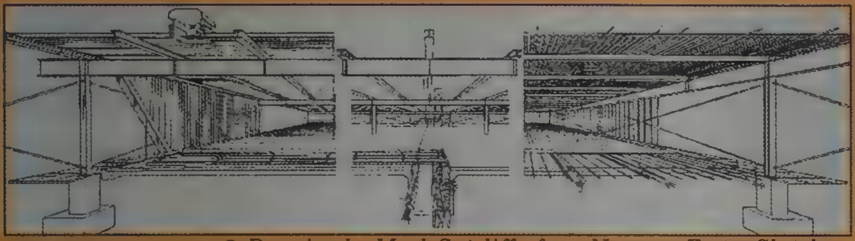
Typically, Sir Norman's work has pushed services and vertical support to the outer extremities, where they boldly express structure and anchor the large, free-flowing interiors that stem from his fascination with the aircraft industry (he is a pilot) and space technology. At the same time, his use of glass, as in the mullion-free curved facade of his Willis Faber & Dumas Building, Ipswich (2) (Britain's only post-World War II building to achieve "listed" status), has the effect of virtually eliminating any visual boundary between inside and outside.

Educated at Manchester University and Yale, Sir Norman has won 15 international design competitions, 114 awards and citations, Britain's 1983 Royal Gold Medal for Architecture, and the 1991 Gold Medal of the French Academy of Architecture. He was knighted in 1991.

1 Factory for Reliance Controls, Swindon
2. Willis Faber & Dumas Building, Ipswich.
3. Sainsbury Center for the Visual Arts, Norwich
4. Renault Distribution Center, Swindon
5. Hong Kong and Shanghai Banking Corporation
   Headquarters, Hong Kong
6. Stansted Airport Terminal, Stanstad, Essex
7. Sackler Galleries, The Royal Academy, London
8. Century Tower Building, Tokyo
9. Barcelona Telecommunication Tower
10. Hong Kong Airport
11. Commerzbank Headquarters, Frankfurt
12. [illegible]istag (New Parliament Building), Berlin.
13. [illegible]n Air Museum in Britain, Imperial War [illegible] Duxford.

© Photo by Rudi Meisel/Visum

60s—70s



1 *© Drawing by Mark Sutcliffe, from Norman Foster Sketches, Birkhauser Verlag, 1992 1*

2 *©Ken Kirkwood*

70s—80s

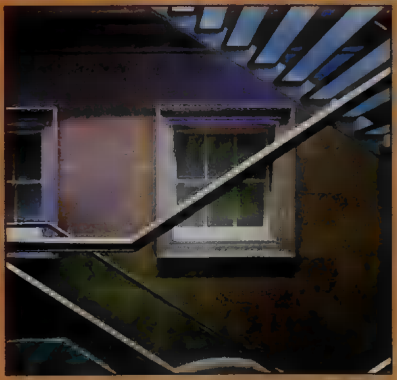
3 *© Ken Kirkwood*

4 *© Richard Davies*

5 *© Ian Lambot*

90s

6 *© Ken Kirkwood*



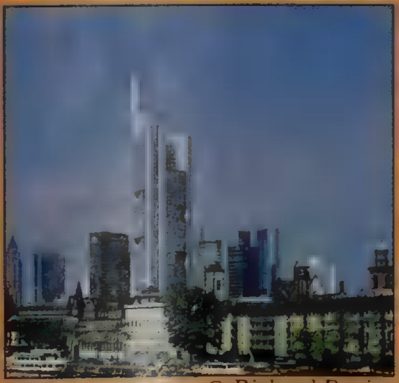
7 *© Dennis Gilbert*

8 *© Ian Lambot*

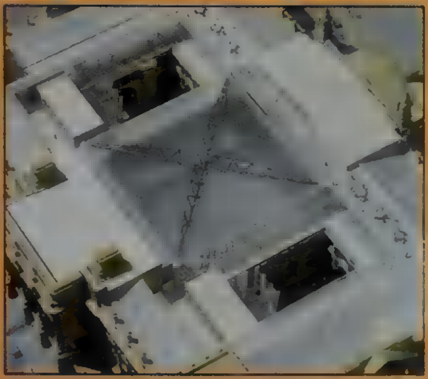
9 *© Ben Johnson*

FUTURE

10 *© Richard Davies*



11 *© Richard Davies*



12 *©Richard Davies*

13 *©Richard Davies*

THE AIA TWENTY-FIVE YEAR AWARD

Haystack Mountain School of Crafts

Edward Larrabee Barnes's 1962 Haystack Mountain School of Crafts is a villagelike collection of simple geometric forms tucked into the vegetation that tumbles down the side of Deer Isle, Maine, to the Jericho Bay. Rising on piers, the summer school's workshops, dormitories, and communal buildings appear to hover above, rather than conquer, the landscape.

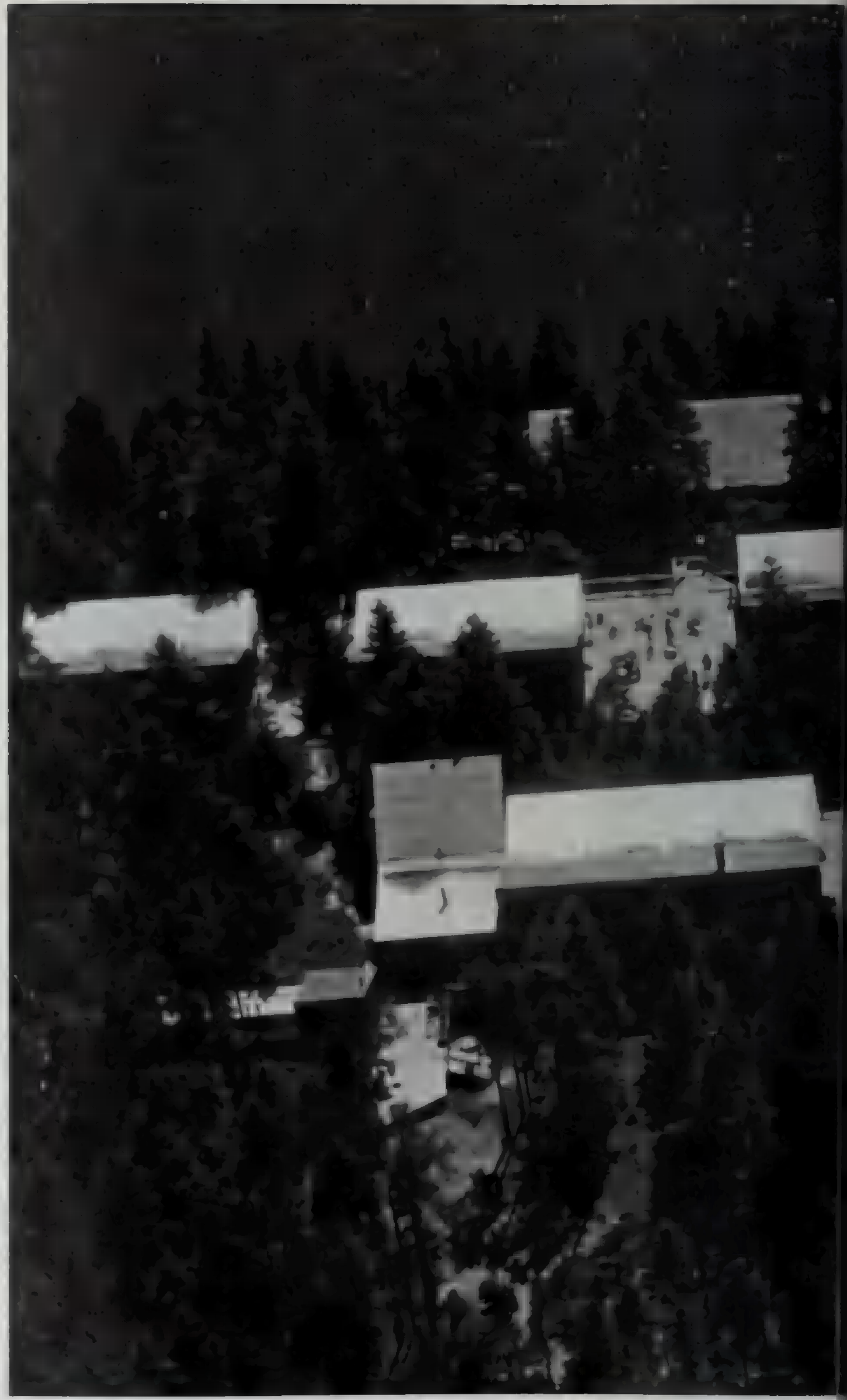
Designed at a time when many architects were moving toward elaborate sculptural forms, the unheated, uninsulated structures, which cost $5 a square foot to build, resemble modest farm outbuildings. "I've always been drawn to making things as simple as possible," Barnes told *Architecture* magazine in 1989, "if you can do that without making them inhuman or dull or oppressive."

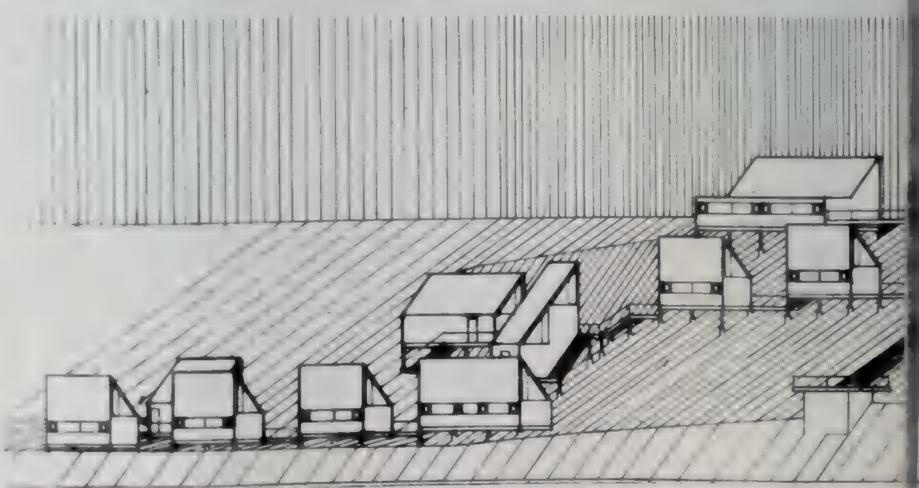
After 32 years, Haystack's shingles have weathered to gray and collected a coating of lichen, making the architecture appear more at one with the site than ever. The school offers graphics, weaving, metal, wood, and clay studios and a "hot shop" for metal and glass blowing. From time to time, teachers may orient a course to investigate their craft's architectural ramifications.

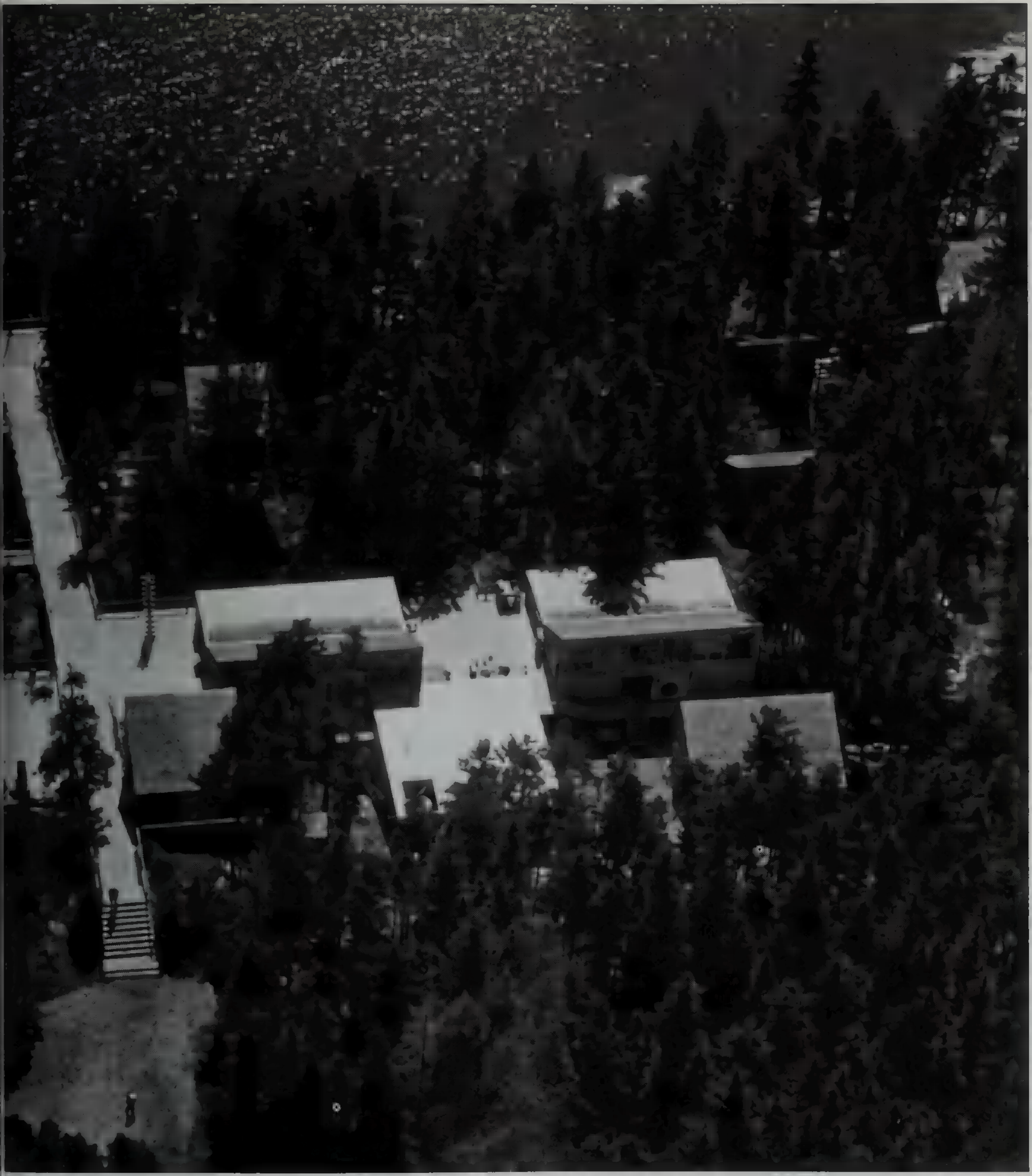
"For architects who have studied the complex, it has provided an early and profound example of the fruitful and liberating fusion of vernacular building traditions with the rationality and discipline of Modern architecture," says Donlyn Lyndon, chairman of the AIA Honor Award jury that selected Haystack for the 1994 Twenty-Five Year Award.

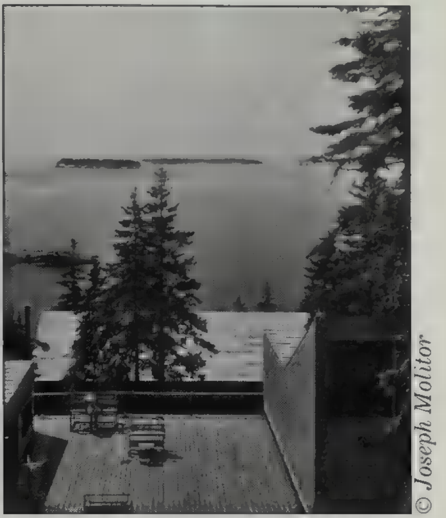
Boston Globe architecture critic Robert Campbell, who nominated Haystack for the award, recalls that the sharp rise-and-fall profile of the monopitch-shed buildings "was instantly accepted as a classic and became a major influence on the architecture of the 1960s, including such more-celebrated works as Sea Ranch."

Barnes, who studied under Gropius and Breuer at Harvard, has had his own office in New York since 1949.









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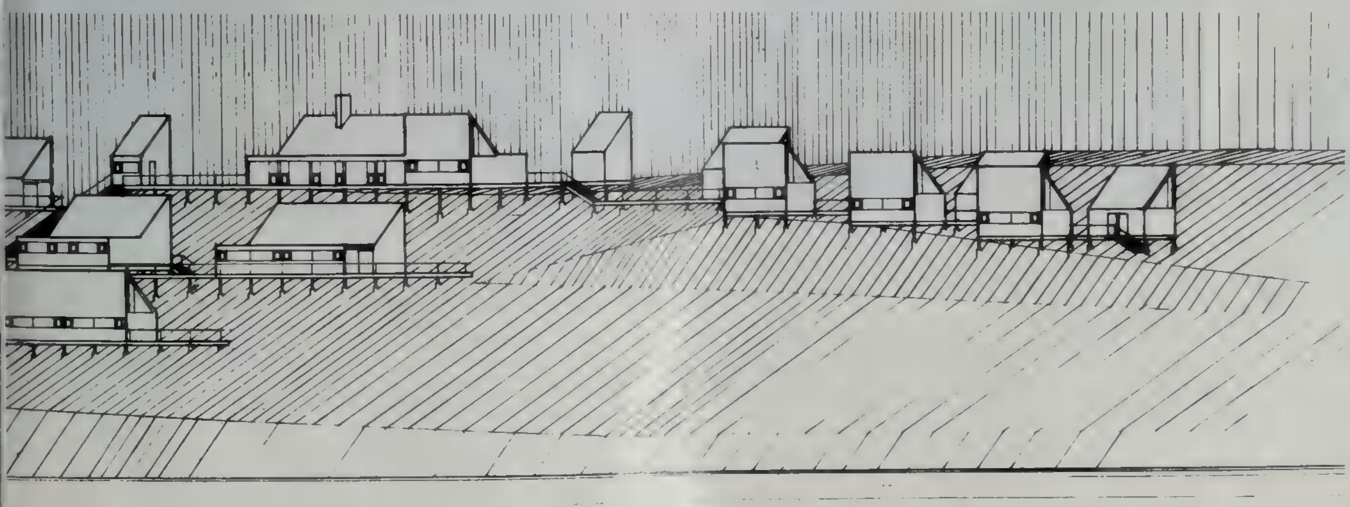
All decks and walkways lead to Haystack Mountain's central organizing feature, a long, wide staircase that plunges 90 feet to the water (left). Decks offer views over the tops of adjacent buildings (top). Ribbon windows and the proximity of the landscape lend a tree-house air to workshops (above).

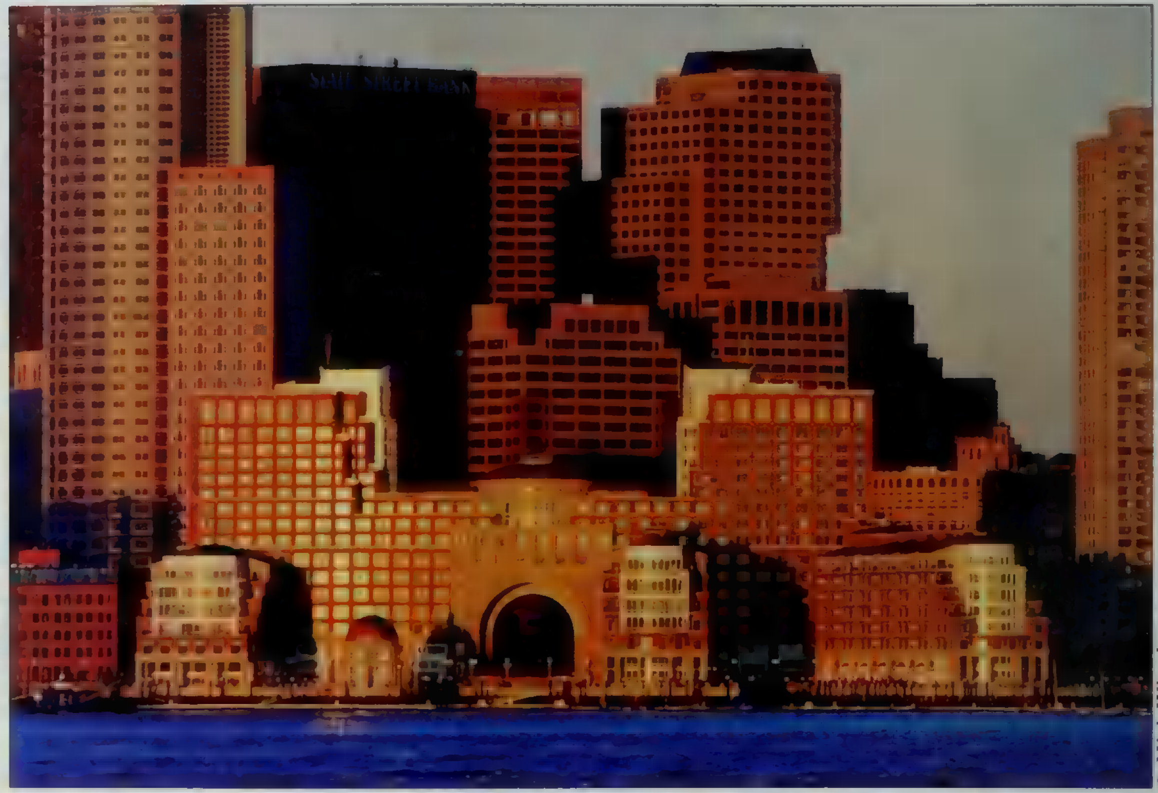


"A LIVELY CIVIC SPACE THAT, ALTHOUGH PRIVATELY DEVELOPED, IS SUPREMELY PUBLIC IN SPIRIT."

ROWES WHARF
Boston
Architect
Skidmore, Owings & Merrill
Owner
The Beacon Companies and
The Equitable Life Assurance
Society of the U. S.

The jury declared that Rowes Wharf "sets a standard for waterside development, demonstrating the power of architecture to capture the public imagination and restore life to neglected parts of the urban landscape. On the city side, the curving wall of the building frames a great domed space whose enormous arch serves as a spectacular gateway to the water, while on the harbor side, wharf-like buildings reach out like welcoming arms for those entering the city from Boston Harbor. The combination of harborside forms, high-quality materials, and working water plaza makes this complex, mixed-use project a genuine and integral setting for city life. By carrying the urbane vocabulary of downtown Boston right to the water, Rowes Wharf has helped create a lively civic space that, although privately developed, is supremely public in spirit."

To link the project to its surroundings, "we employed various contextual strategies," explained SOM. A visual corridor is maintained through the site connecting the project to the city's historic center, and the peninsulas extend a welcome to those approaching the city by boat."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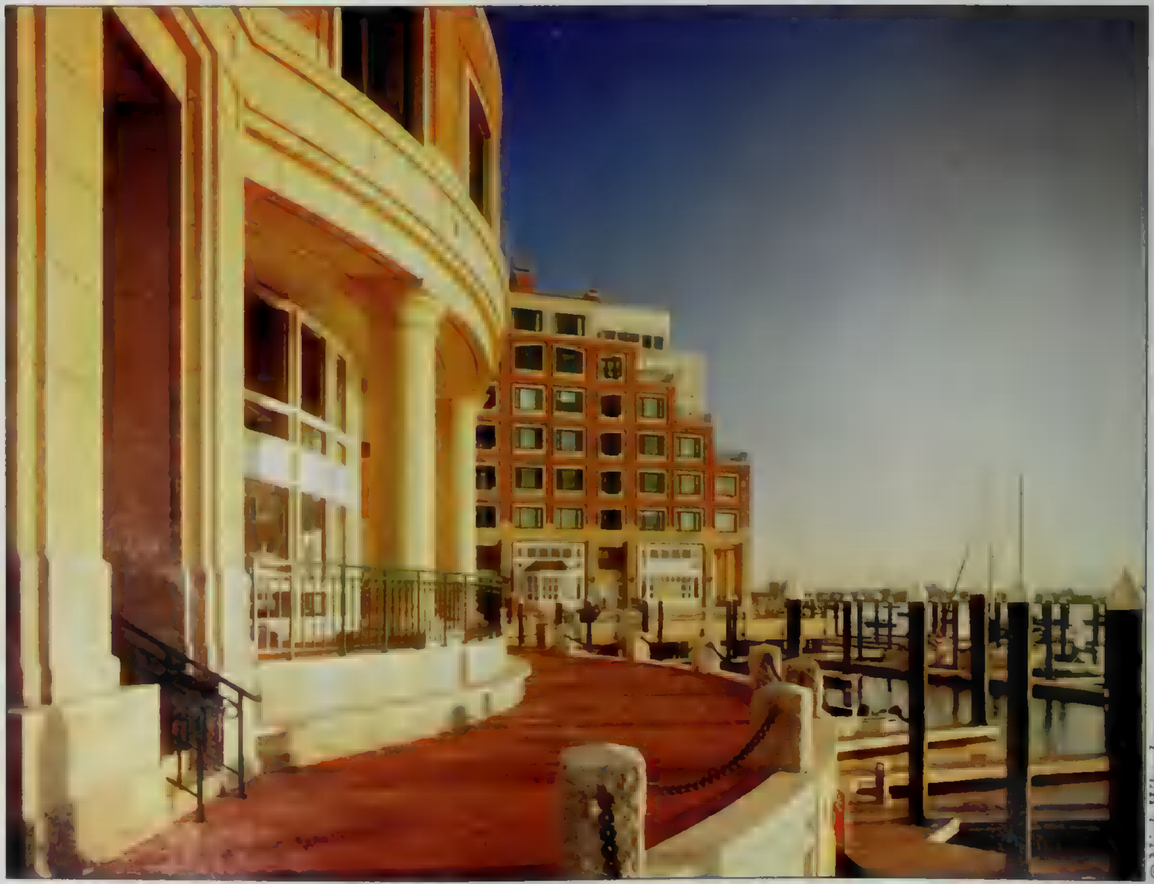
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"A HANDSOMELY DETAILED HIGH SCHOOL PROVIDING A FOCUS FOR COMMUNITY ACTIVITY AND PRIDE."

TROY HIGH SCHOOL
Troy, Mich.
Architect
Perkins & Will
Owner
Troy Public Schools

© Nick Merrick/Hedrich-Blessing photos

Commented the jury, "From the signature stair tower at the main entrance to the library's rotunda, to the subtle use of three colors of brick, Troy High School is handsomely detailed and well planned. The public and communal areas like the library, hallways, and pool are flooded with daylight through the skillful use of skylights and clerestories, while generous windows in the classrooms bring in views of the courtyards and woods. Though it's quite large, its insistent horizontality allows it to be simultaneously monumental yet unimposing in its suburban site—a robust civic presence. Its elegant, villagelike plan is created by extending classroom wings rearward toward a grove of trees that helps isolate the school from its neighbors, while another wing, culminating in the theater, faces the town as a gesture of connection to the community. Through superb siting, strong forms, and a functional yet engaging floor plan, the architects have created not only an admirable school, but a focus for community activity, identity, and pride."

AIA HONOR AWARDS FOR ARCHITECTURE

"UNPRETENTIOUS STUDENT HOUSING MAKING THE MOST OF A LIMITED BUDGET AND DIFFICULT SITE."

THE COOPER UNION RESIDENCE HALL
New York City
Architect
Prentice & Chan, Ohlhausen
Owner
The Cooper Union

Familiar without being old fashioned, this skillfully executed student housing complex draws its forms from the school's cluttered New York neighborhood. "The architects bring order to a high-rise tower that carefully marks its place without overwhelming its neighbors," complimented the jury. "Immaculate, well-ordered interior spaces offer comfortable apartments as well as communal areas for socializing and working. The architects' generous use of windows provides ample natural light and gives residents interesting views of the city, constantly connecting them and this residence to the larger urban context."

© Brian Rose photos

"A COMPUTER CENTER THAT BLENDS HUMAN TOUCHES WITH STATE-OF-THE-ART TECHNOLOGY."

COMPUTER SCIENCE BUILDING
Princeton University
Princeton, N. J.
Architect
R. M. Kliment & Frances Halsband
Architects
Owner
Princeton University

The computer science center at Princeton University serves student and faculty needs by skillfully blending a human touch with state-of-the-art technology," commented the jury. "Light-drenched offices and classrooms, rich oak paneling throughout, and the wide windowsill in the main hallway evoke the feel of turn-of-the-century educational buildings, creating a comfortable, user-friendly environment that encourages human interaction and conversation."

"In massing, in plan, and in materials selected for its spaces and surfaces, the new building engages the cultural and physical context of Princeton University," said Kliment and Halsband. "It defines and extends McCosh Walk and establishes a formal language for the development of subsequent buildings. The building is organized around three entrance towers that anchor it to the pedestrian circulation patterns. The towers are limestone and red brick; limestone headers are introduced into the Flemish bond of the brick wall. A limestone colonnade connects the south and west entrances and defines the eastern enclosure of the future quadrangle. The building is constructed of steel frame and sheathed in red brick and limestone, the materials of most campus classroom buildings. Windows are painted gray aluminum to resemble the leaded windows of the older buildings on campus.

"The cable shelves in the corridor's ceilings and the hollow walls of the offices [illegible] designed to provide easy access for the [illegible] changes in cabling required by the [illegible] changing requirements of com-

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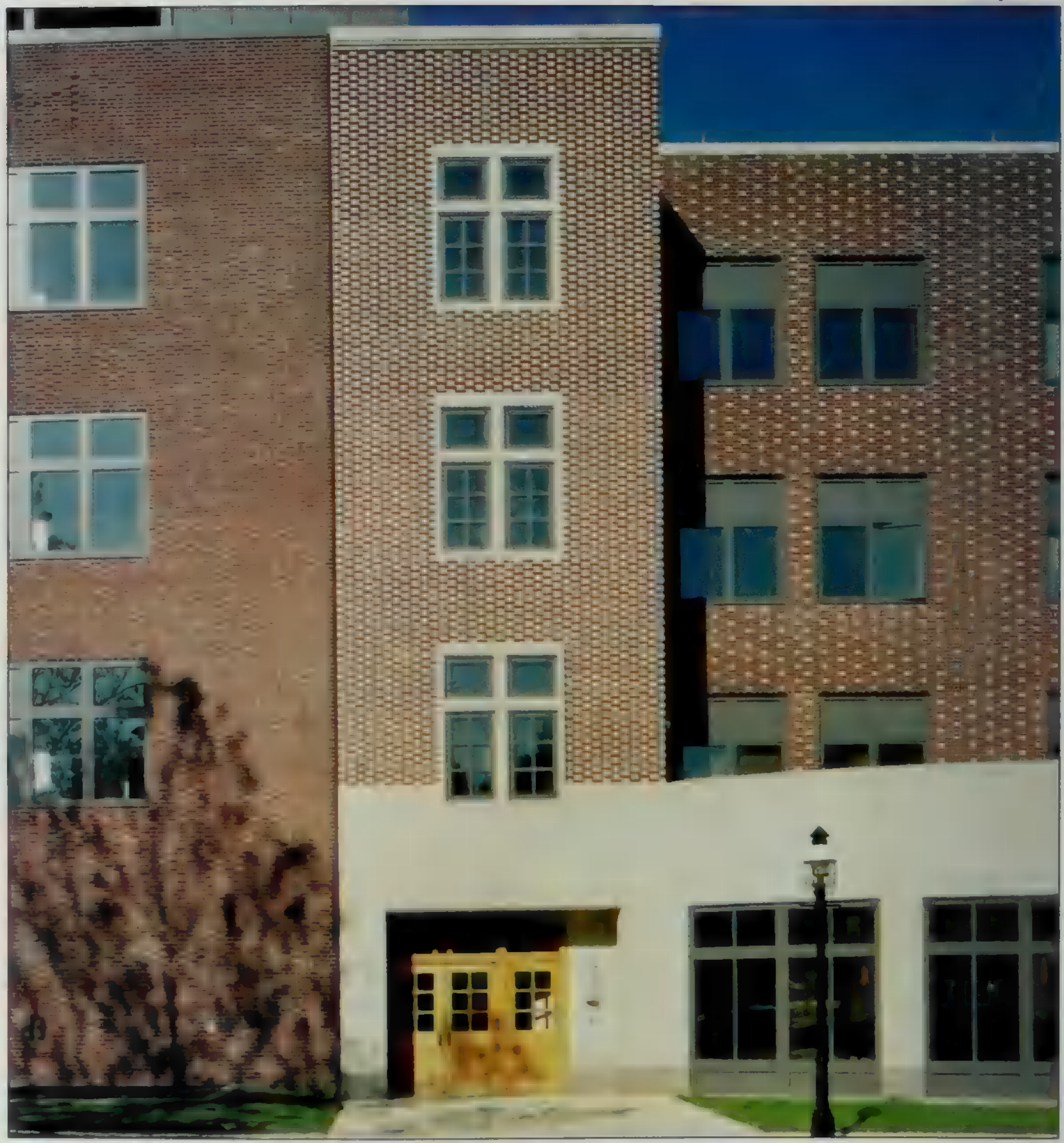
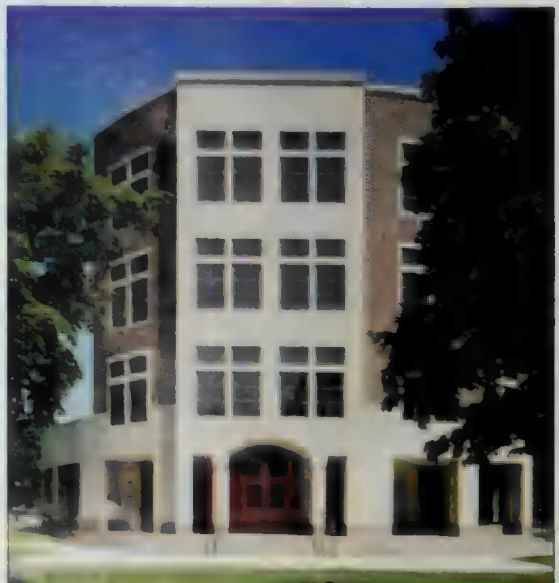
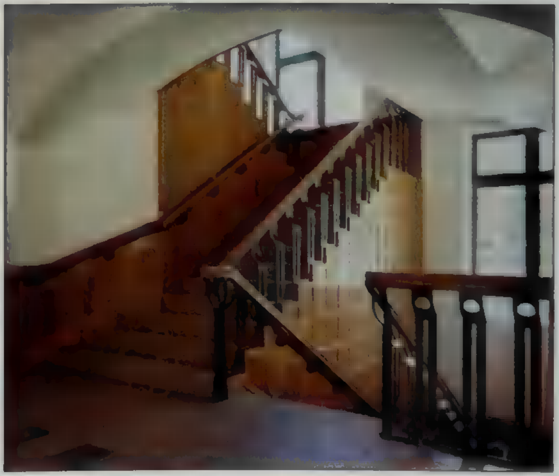


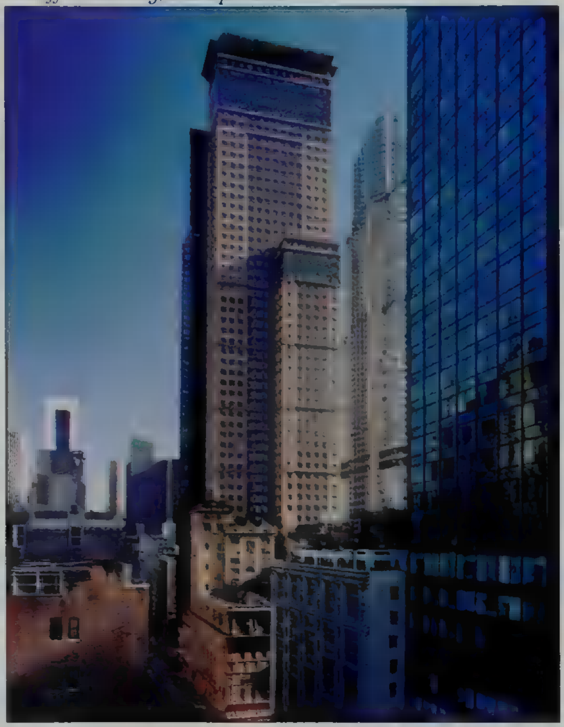




"THE BUILDING IS A MODEL OF CONTEXTUAL DESIGN AND URBAN NEIGHBORLINESS."

CARNEGIE HALL TOWER
New York City
Architect
César Pelli & Associates Inc.
Associate Architect
(Architect of Record)
Brennan Beer Gorman

"Respectfully bowing to its revered, hundred-year-old neighbor, Carnegie Hall Tower discreetly steps back from the street to allow the historic concert hall to retain its well-earned prominence in the New York landscape," applauded the jury. "By ingeniously tucking itself in and around Carnegie Hall, the tower manages not to overwhelm the much shorter structures on either side in spite of its considerable height. Due to the adroit use of complementary materials and closely matching colors, its contribution of service and lobby space to the crowded concert hall and, most importantly, ingenious use of setbacks, the building is a model of contextual design and urban neighborliness. Dashing, slender, and neat as a pin, the tower is a colorful enhancement of the Manhattan skyline."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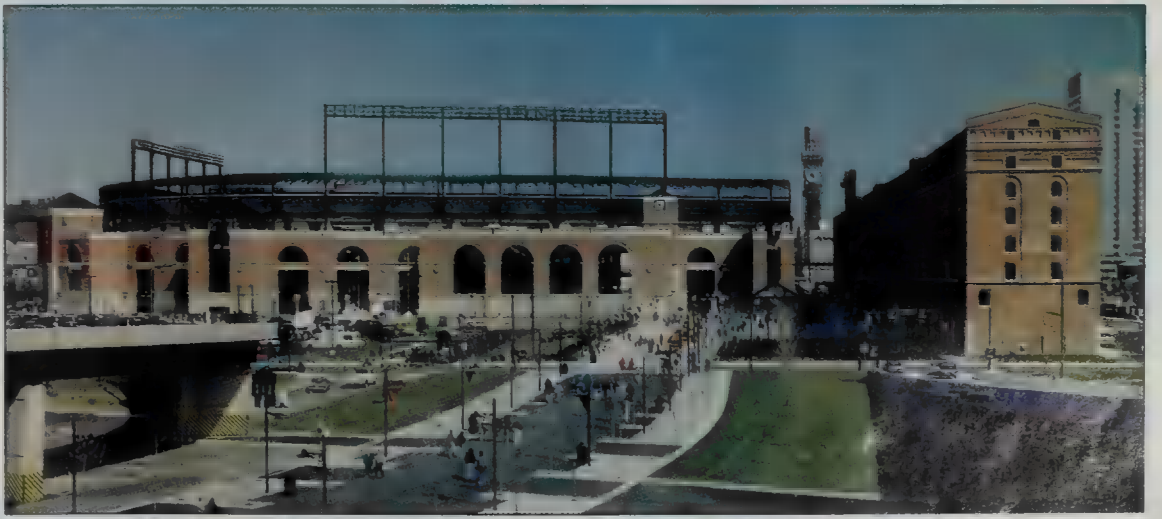
AIA HONOR AWARDS FOR ARCHITECTURE

"A SKILLFUL BLEND OF TRADITIONAL BASEBALL PARK DESIGN AND MODERN TECHNOLOGIES AND ECONOMICS."

ORIOLE PARK AT CAMDEN YARDS
Baltimore
Architect
Hellmuth, Obata & Kassabaum
Sports Facilities Group
Master Plan and Urban Design
Hellmuth, Obata & Kassabaum
Sports Facilities Group
RTKL Associates Inc.
Wallace, Roberts & Todd
Owner/Developer
Maryland Stadium Authority

"The architects and their enlightened clients have built not merely another ballpark, but a very important public place, bringing people into contact with each other and with the city itself," commended the jury. "It deftly blends elements drawn from traditional baseball parks with the demands of modern technologies and economics. Every aspect of the design of Camden Yards, from the smallest graphic touches to the largest structural elements, is lively and good natured."-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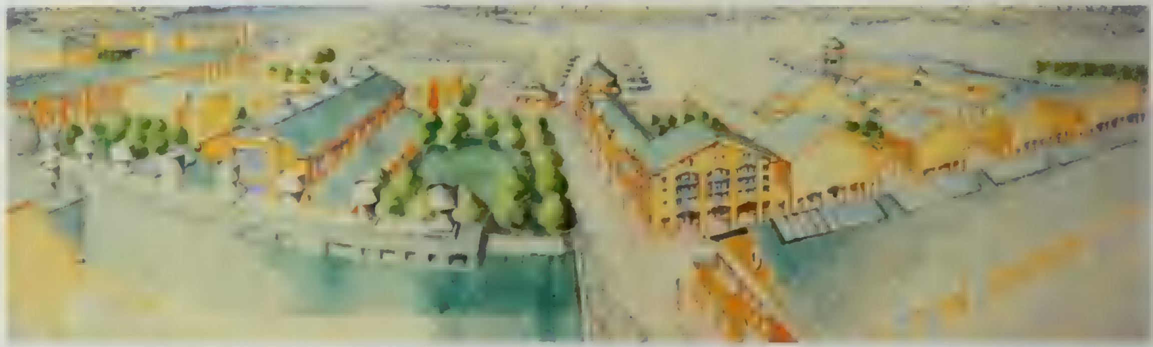
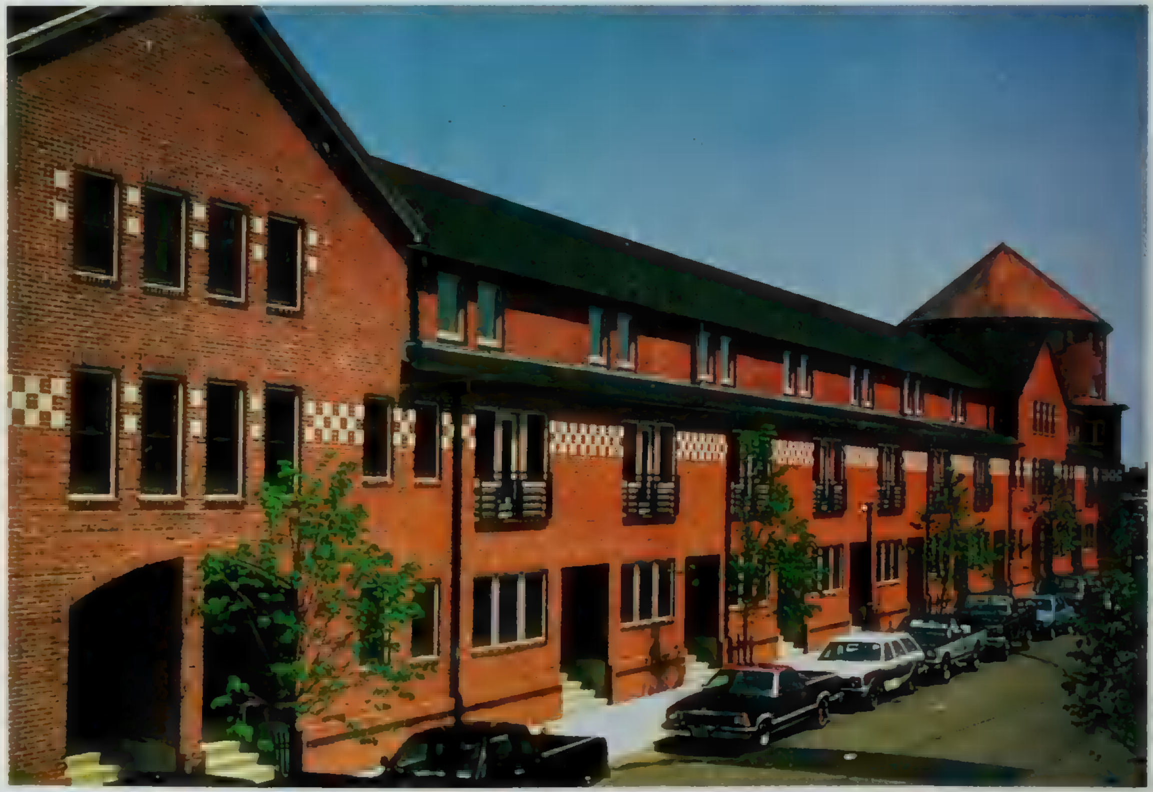
"MODERATELY PRICED HOUSING THAT REAFFIRMS THE PRINCIPLE THAT THE COMBINATION OF DESIGN EXCELLENCE AND AFFORDABILITY CAN STRENGTHEN THE CHARACTER OF THE COMMUNITY."

CHARLESTOWN NAVY YARD ROWHOUSES
Boston
Architect
William Rawn Associates,
Architects Inc.
Owner
Bricklayers and Laborers Non-Profit
Housing Company Inc.





Developed through close collaboration between skilled architect and visionary nonprofit client, the Charlestown Navy Yard Rowhouses fulfill the often elusive goal of creating housing that is affordable yet of the highest quality," commended the jury.

"The landmark round tower by the water's edge anchors the project and ties it to the harbor, while at the other end, the broad, gabled section fronting the public street establishes the building as a worthy and welcome neighbor. In between, the scale is lowered, with stoops on one side and porches with water views on the other, making this a comfortable and distinctive place to live. The success of this project reaffirms the principle that the combination of design excellence and affordability can strengthen the character of the community."

William Rawn Associates described the project as "50 units of affordable housing, built on the edge of an urban harbor, to address the family housing needs of first-time home buyers. Most units contain two-and-a-half, three, or four bedrooms.

"The design strengthens First Avenue as the Main Street of the former Navy Yard: The form and front of the large gable end of Building One match the scale of existing buildings and strengthen the character of this two-sided street running parallel to the water's edge. This links the building to the rest of the community, thereby helping to eliminate any stigma attached to affordable housing.

"The building's three parts are unified by special masonry elements, including the [illegible] water table and the granite checkerboard pattern, which acts as a belt to tie the [illegible] together. Responding to family needs, [illegible] townhouse has a private yard at [illegible] each upper unit its own 150-[illegible] deck."

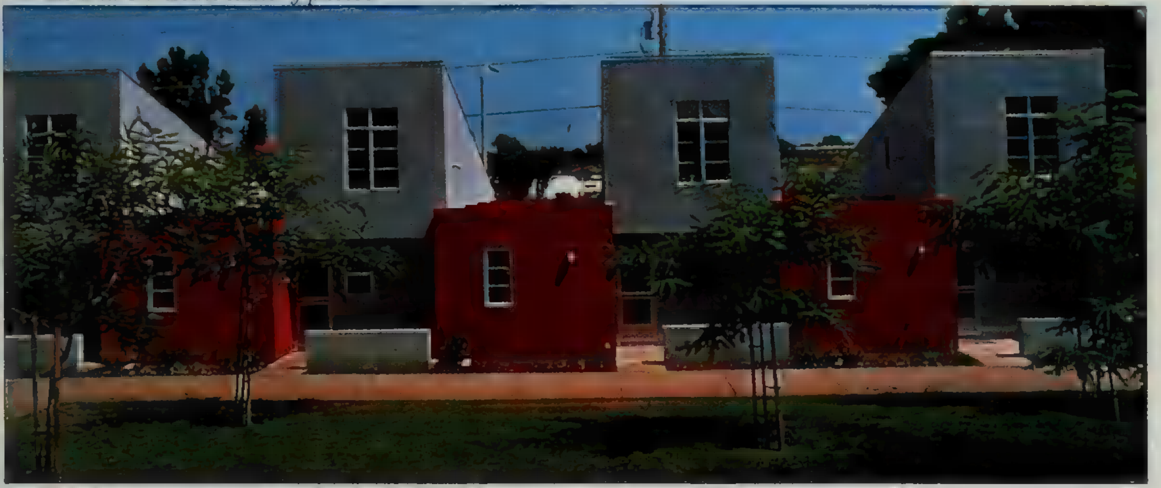
© Steve Rosenthal photos

AIA HONOR AWARDS FOR ARCHITECTURE

"A REFRESHING SOLUTION TO THE PROBLEM OF PROVIDING HIGH-QUALITY, LOW-COST HOUSING TO LOW-INCOME FAMILIES."

DAYBREAK GROVE
Escondido, Calif.
Architect
Davids Killory
Associate Architect
Studio E Architects
Owner
The North County Housing Foundation

Davids and Christine Killory photos

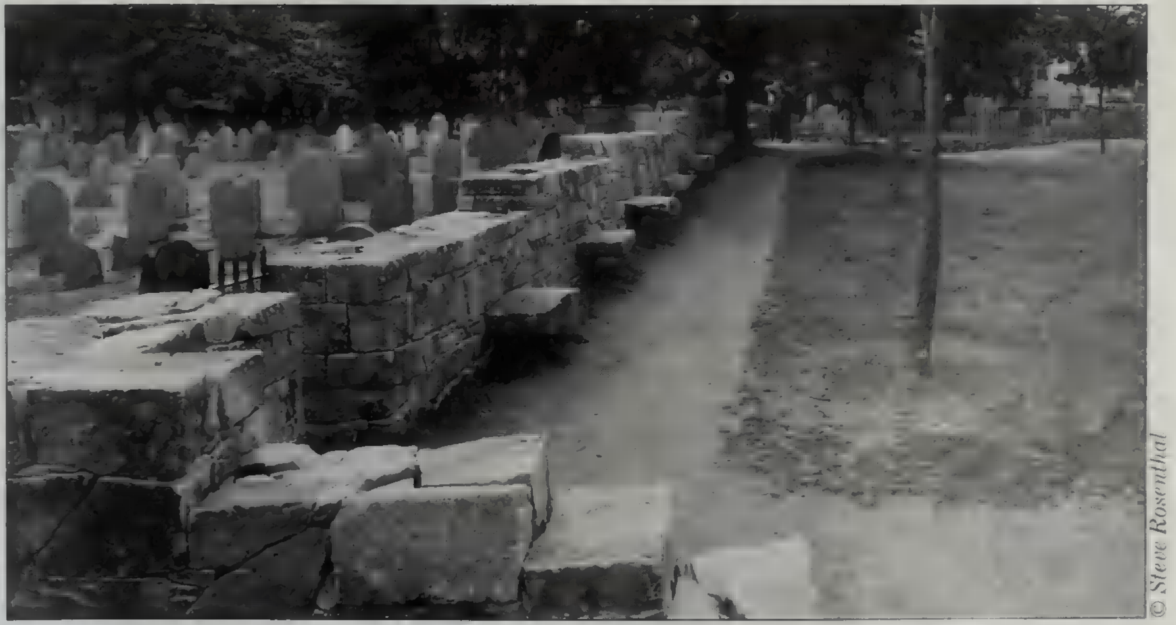


The architects organized the colorful stucco duplex units with their bold forms and striking geometry around a central courtyard, establishing a place of special pride," noted the jury. "The raised sidewalks at the front of the building separate the houses from the busy street, while the patios at the center of each unit expand the living space and bring natural light and cross ventilation to each room. The beautifully landscaped common area, with its central courtyard, laundry building, and community gardens, provides supervised places for children to play and adults to socialize. Cheerful, practical, economical, and appropriate to its context, this project is a model for other communities."

AIA HONOR AWARDS FOR ARCHITECTURE

"A PROFOUND AND MOVING TRIBUTE TO VICTIMS OF INTOLERANCE AND UNREASONING FEAR."

SALEM WITCH TRIALS TERCENTENARY MEMORIAL
Salem, Mass.
Architect
James Cutler Architects
Associate Artist
Maggie Smith
Owner
City of Salem



© Steve Rosenthal

The jury called the memorial "starkly simple and calmly eloquent; a remarkable collaboration between artist and architect. The subtle symbolism of the design is epitomized by the use of the plaintive, desperate words of the 20 condemned women and men at their 1692 trials. The words disappear in midsentence under the stone walls at the memorial's entrance as if obliterated by indifference and ignorance. By placing the memorial in the midst of the graves of the denouncers, judges, and neighbors of the victims, the designers have symbolically reenacted the confrontation. The rough granite walls and barred iron fence deliberately create a stark boundary between the accusers and the accused, now divided yet forever linked in a solemn, tragic tableau, reminding us that the crime was not witchcraft, but silence in the face of injustice."

© Maggie Smith

"A DISCIPLINED AND LIVELY ELEMENTARY SCHOOL THAT INSPIRES LEARNING."

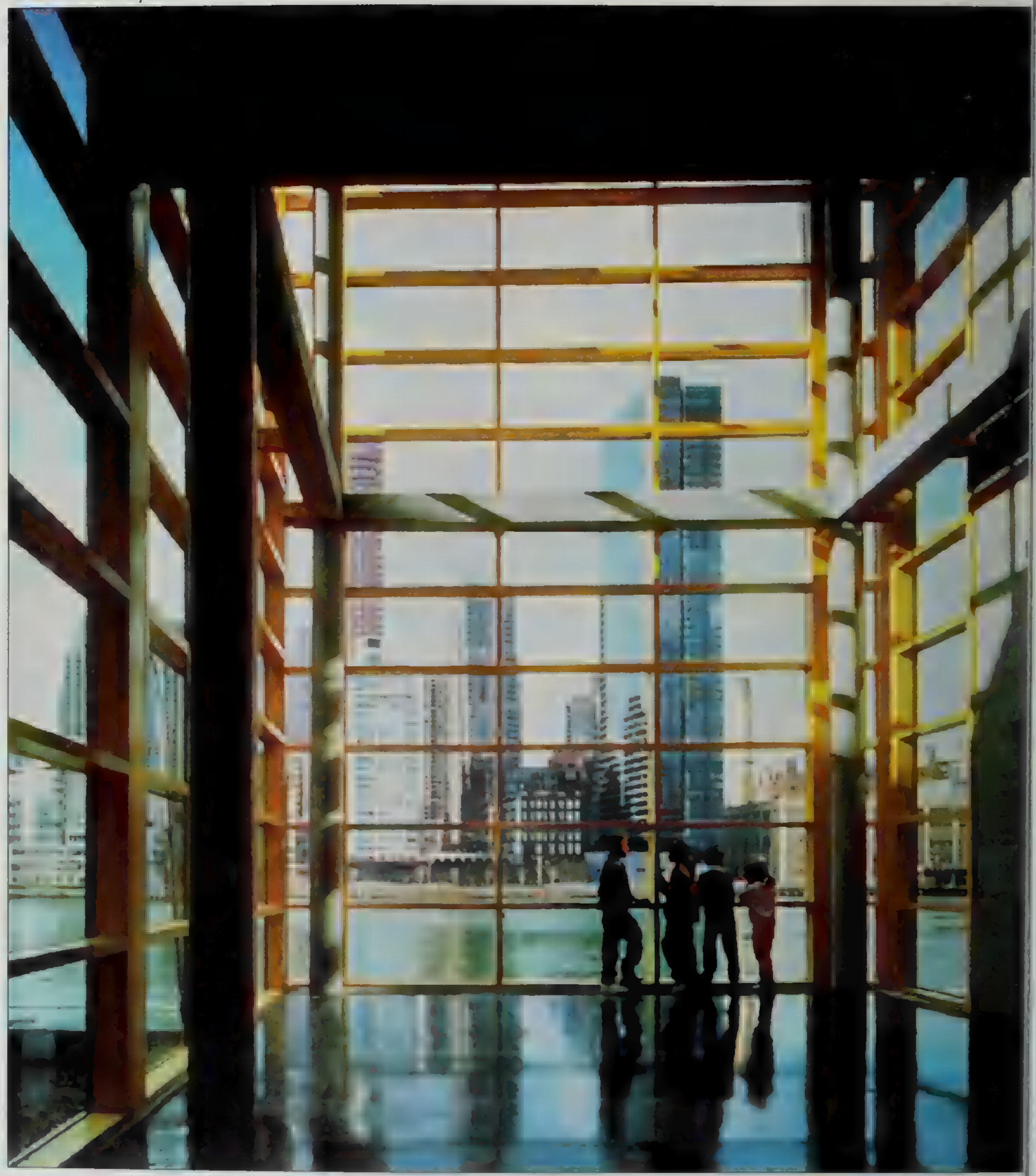
PRIMARY/INTERMEDIATE SCHOOL 217
New York City
Architect
Michael Fieldman & Partners
Owner
New York City School Construction Authority

Calling the primary/intermediate school "vigorous yet joyful, tough yet welcoming," the jury lauded it as "unapologetically urban, providing a serious and secure environment for learning. Disciplined and composed, this building is a celebration of bold forms, from the cube of the art and music pavilion to the rigorous grid of the Main Street facade, yet its formal geometry is enhanced by vivid colors and child-friendly details, making it a lively, inspiring place to go to school. Singularly appropriate for its Roosevelt Island site overlooking the East River, this dignified and necessarily tough-minded structure hugs the street, tying it directly to the bigger community, while its campuslike plan creates a smaller, sheltering community for the children themselves. By offering spectacular views of Manhattan at the end of a two-story glass-walled corridor, the building visually connects the children to the city and their future."

Submitting the project for consideration, Michael Fieldman & Partners recalled that "the climate was ripe for innovation. A restructured large-city bureaucracy needed a pilot project to demonstrate its effectiveness. An extraordinary site was available on Main Street of Roosevelt Island, overlooking the Manhattan skyline. A progressive program called for a full primary/intermediate school serving 849 students K-8. An active community demanded an outstanding design responsive to the unique village atmosphere.

"The architect's response was clear: Develop a mini-campus approach that retains the village atmosphere and responds to the program and site potential."

© Chuck Choi photos



"A MODEL OF INFILL ARCHITECTURE, CREATIVELY RECLAIMING PRODUCTIVE AND LIVABLE SPACE THROUGH TIGHT, EFFICIENT DESIGN."

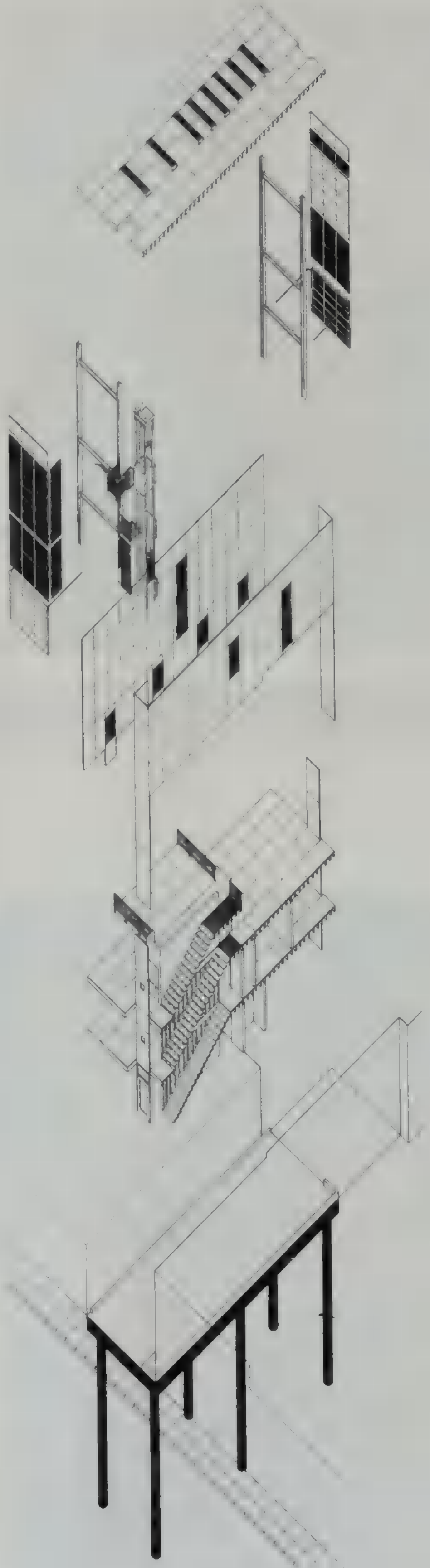
CORSON-HEINSER LIVE/WORK

San Francisco
Architect
Tanner Leddy Maytum Stacy Architects
Owners
Madeleine Corson and Thomas Heinser

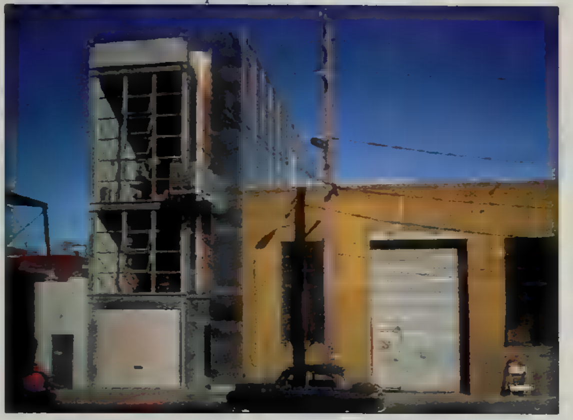
Stated the jury, "The architects have recast galvanized metal, plywood, industrial windows, and other homely and economical materials into a beautiful, rich spatial magic. Although the building is very narrow, the living and working areas are remarkably spacious and airy, thanks largely to natural light that is allowed to pass through the house via imaginative details like metal grates in the stairs. Built on a sliver of a lot in a gritty San Francisco neighborhood, both the exterior and interior of the Corson-Heinser Live/Work building are carefully detailed in an unabashed celebration of connections and joints, adroitly transforming the intersections between metal, glass, and wood into ornament.

"The site of this live/work combination is a narrow, vacant lot fronting a blocklong alley south of Market Street in San Francisco. The surrounding gritty, industrial area, including warehouses and other utilitarian loft structures, has been transformed recently into a residential and commercial enclave for artists, designers, start-up businesses, and entertainment. The young clients—a fashion photographer and a graphic designer— sought to house their two business spaces, residence, and a garage in a new structure. Maximum natural light was desired in all spaces, especially in the photography studio."

Explained Tanner Leddy Maytum Stacy, "The loft-space organization is flexible and adaptable. Due to the height differences between the two neighboring buildings, greater opportunities for property-line windows existed to the north. The main loft spaces are located on the north side, with the stair, baths, elevator, and storage areas grouped on the south side in two parallel bars. To provide an earthquake-resistant structure, steel frames were placed at the front and rear, supported by a concrete slab with piers that extend deep into the marshy soil."



© Thomas Heinser photos



AIA HONOR AWARDS FOR ARCHITECTURE

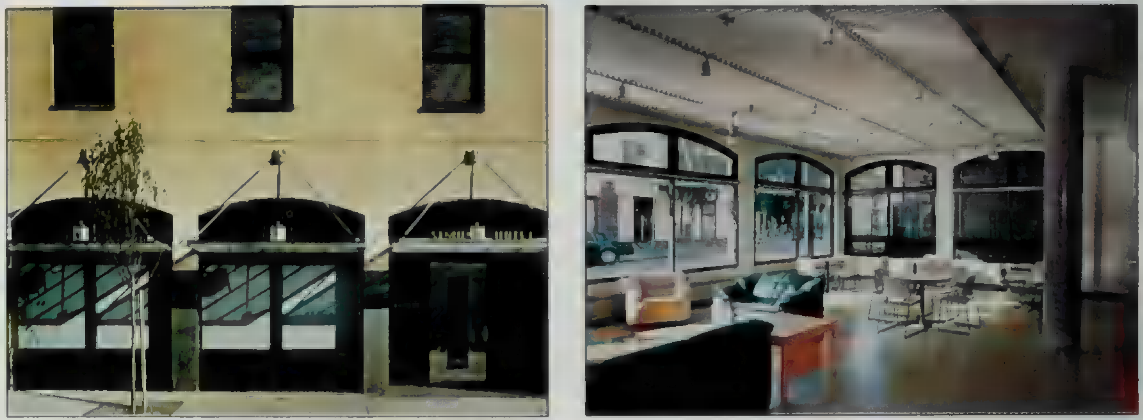
"A COMFORTABLE SINGLE-ROOM-OCCUPANY HOTEL THAT RESPECTS ITS CONTEXT AND THE DIGNITY OF ITS RESIDENTS."

THE SIMONE HOTEL

Los Angeles
Architect
Koning Eizenberg Architecture Inc.
Owner
Skid Row Housing Trust

The Simone Hotel is a 123-room, five-story single room occupancy (SRO) residential hotel located in the Skid Row area of downtown Los Angeles. The first SRO hotel built in Los Angeles in 30 years, the project presented a timely opportunity to reassess its building type. The historic models are practical, economic buildings; at first glance, the new SRO does not appear different from these models. Further investigation reveals subtle organizational changes that provide safety, comfort, and dignity for the residents. Throughout, emphasis is placed on natural light, and dead-end, unlit hallways are avoided. Also, attention is given to sight lines rather than electronic surveillance equipment. Passive cooling design by use of shading, cross ventilation, and light wells achieves year-round comfort without air-conditioning. It is worth commenting that current codes make it difficult to meet these planning goals in a cost-effective manner.

The jury praised "the creative use of durable, low-cost materials, combined with skillful detailing."



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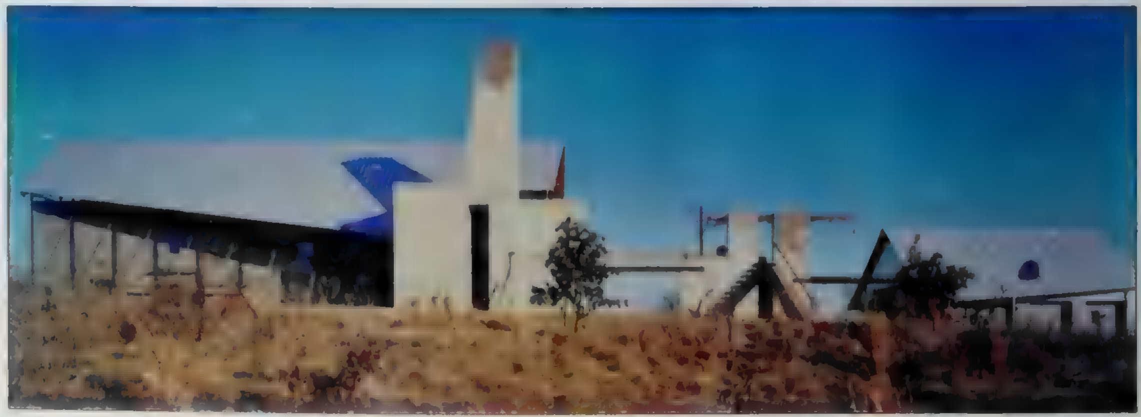
AIA HONOR AWARDS FOR ARCHITECTURE

"A QUIRKY HOUSE THAT REINTERPRETS VERNACULAR ARCHITECTURE."

COOK RESIDENCE

Oxford, Mississippi
Architect
Mockbee/Coker Architects
Owners
Dr. and Mrs. James Cook



© Timothy Hursley photos

The house is "bold without straying too far from its Southern roots," declared the jury. "The expansive metal shed roof suspended over this residence serves to protect the structure from the fierce sun and shelters an exciting upper deck. Contrasting with the utilitarian quality of the exterior, the colorful interior, bathed in natural light, exuberantly expresses the individuality of the owners. In this unique home, the architects have found singular beauty in humble materials and local building forms."

"The rural American South is a landscape of dependent outbuildings and house trailers," explained Mockbee/Coker. "These structures are used for living and, primarily, [illegible] storage of agricultural livestock and [illegible] equipment. These 'super sheds' are designed to protect things of value from the environment. Over a period of time, the principle of building a super shed over their property in order to protect themselves from the elements has developed. It is this basic principle that underpins this house in rural Mississippi. The definition of the natures of American cultures, local and general, depends on a recognition that there can be no general culture unless it is bedded in a locality, that there is no universal except in the local."

AIA Honor Awards For Architecture

"A MASTERFUL RENOVATION/ADDITION THAT INJECTS CONTEMPORARY FORMS INTO THE EXISTING ARCHITECTURAL FABRIC."

FIREHOUSE CIVIC CENTER
Newburyport, Massachusetts
Architect
Schwartz/Silver Architects Inc.
Owners
City of Newburyport and
The Society for the Development of the
Arts and Humanities of
Greater Newburyport

The jury noted, "Taking cues from the building's long history of alterations and varied public and commercial uses, the architects injected contemporary forms into the original 19th-century historic landmark structure perched on the banks of the Merrimack River. Creating a fitting home for a performing arts center, art gallery, and restaurant, at the same time they preserved older elements such as the front facade, the 1930s firehouse tower, brick interior walls, and windows and trim. Engaging in a rich dialogue between the past and present, this highly successful and popular project has reestablished the link between the town and its waterfront and demonstrated that seemingly out-of-date buildings can serve as a catalyst for urban revitalization."

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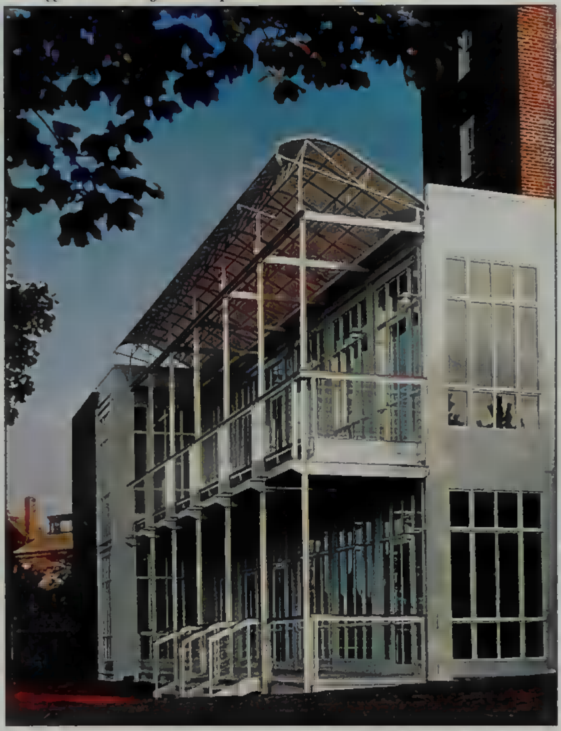
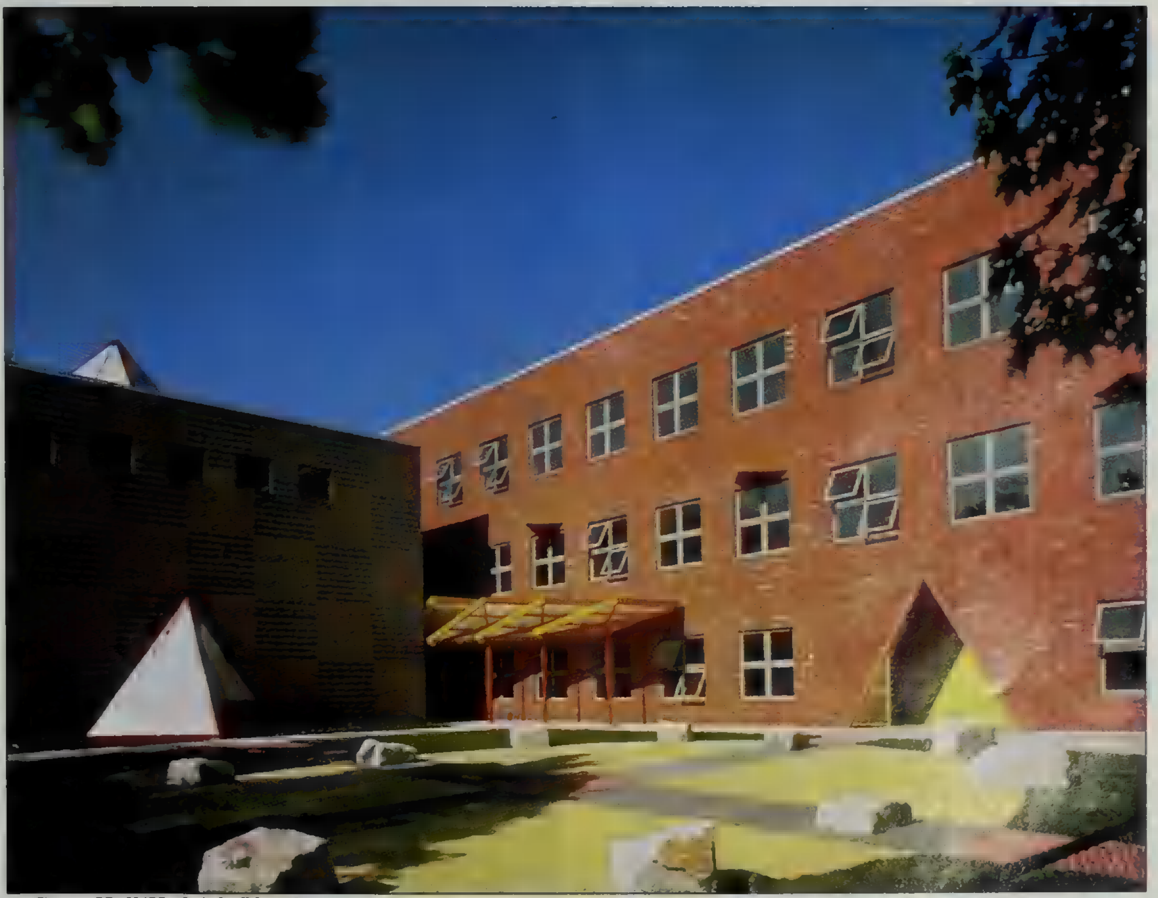


AIA Honor Awards For Architecture

"A COLORFUL, DELIGHTFUL SCHOOL CELEBRATING THE JOY OF LEARNING."

CÉSAR CHAVÈZ ELEMENTARY SCHOOL
Chicago
Architect
Ross Barney+Jankowski Inc.
Owner
Chicago Public Schools

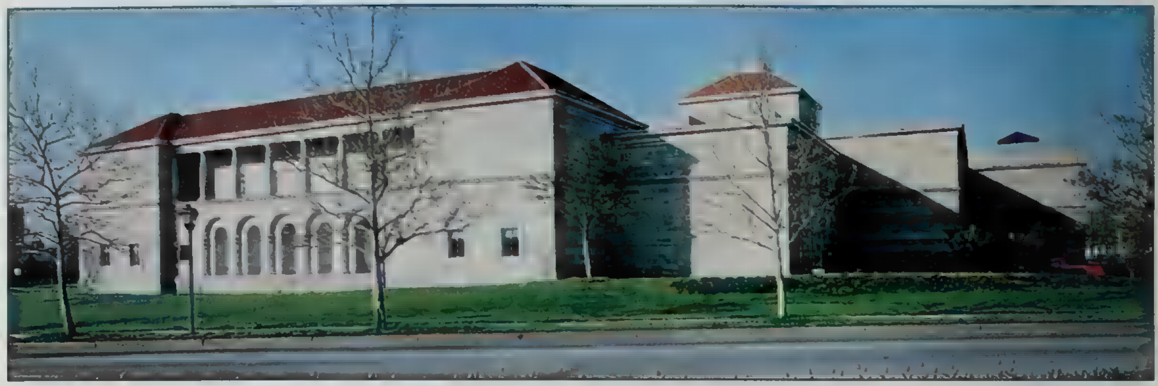
Noted the jury, "Like pieces of a giant Lego® block set, the patterned brick exteriors, pyramidal skylights, and colorful finishes are playful and fun while demonstrating that seemingly diverse parts can be united to form an integrated whole. The open spaces of the site are located in front of the building so that they become a neighborhood amenity watched over by the school. The basic scheme is natural wood and white walls in all classrooms so that the spaces become a personal canvas for students and teachers. Reassuringly confident and a safe haven from a tough Chicago neighborhood, this delightful school is very much a good neighbor and a positive addition to this troubled community."



© Steve Hall/Hedrich-Blessing

"A RENOVATION/EXPANSION THAT BRINGS ORDER TO A ONCE-CHAOTIC JUMBLE OF DISORGANIZED ADDITIONS AND GALLERY SPACES."

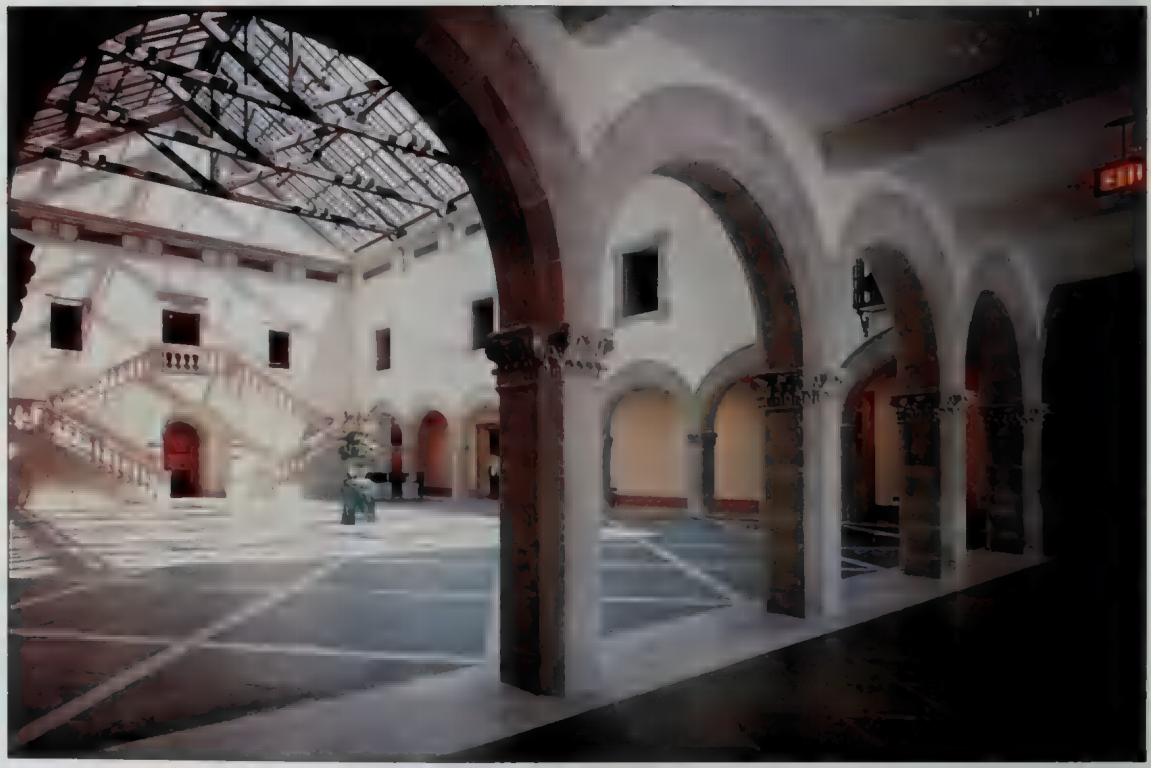
THE CHRYSLER MUSEUM
Norfolk, Virginia
Architect
Hartman-Cox Architects
Associate Architect
Shriver & Holland Architects
Owner
The Chrysler Museum

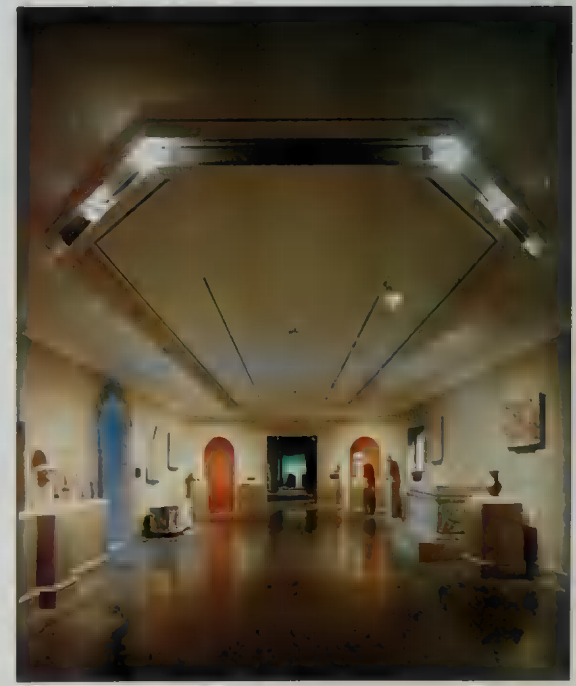


The jury praised "the matching of proportion and style of the original and the reestablishing of the Italianate facade as the major point of entry. The architects have created a symmetrical, balanced exterior that gives this project a powerful sense of place. Inside, the dramatic central courtyard with its majestic staircase and wooden trusses helps to organize the galleries and provides an exquisite public space. Playing the role of surgeon, the architects carefully removed, replaced, and reconfigured elements that no longer functioned and in the process breathed new life into this building and reestablished the museum as an important cultural presence in Norfolk."

Explained Hartman-Cox, "The original 1930s Italianate building had been remodeled several times and had acquired two major additions, each of which departed significantly in style, site orientation, materials, and interior organization from its predecessor. The result was architectural chaos and a confusing interior spatial organization. Growth of the collection of paintings, sculpture, furniture, and glass provided the impetus for a 50,000-square-foot expansion. The building's age and faltering mechanical systems required the renovation of an additional 40,800 square feet of existing space.

"The original exterior courtyard, which the new additions have reestablished as the center of the complex, was covered by a skylight. The original arches surrounding the court were reopened, creating loggias that lead into the new and renovated first floor galleries."





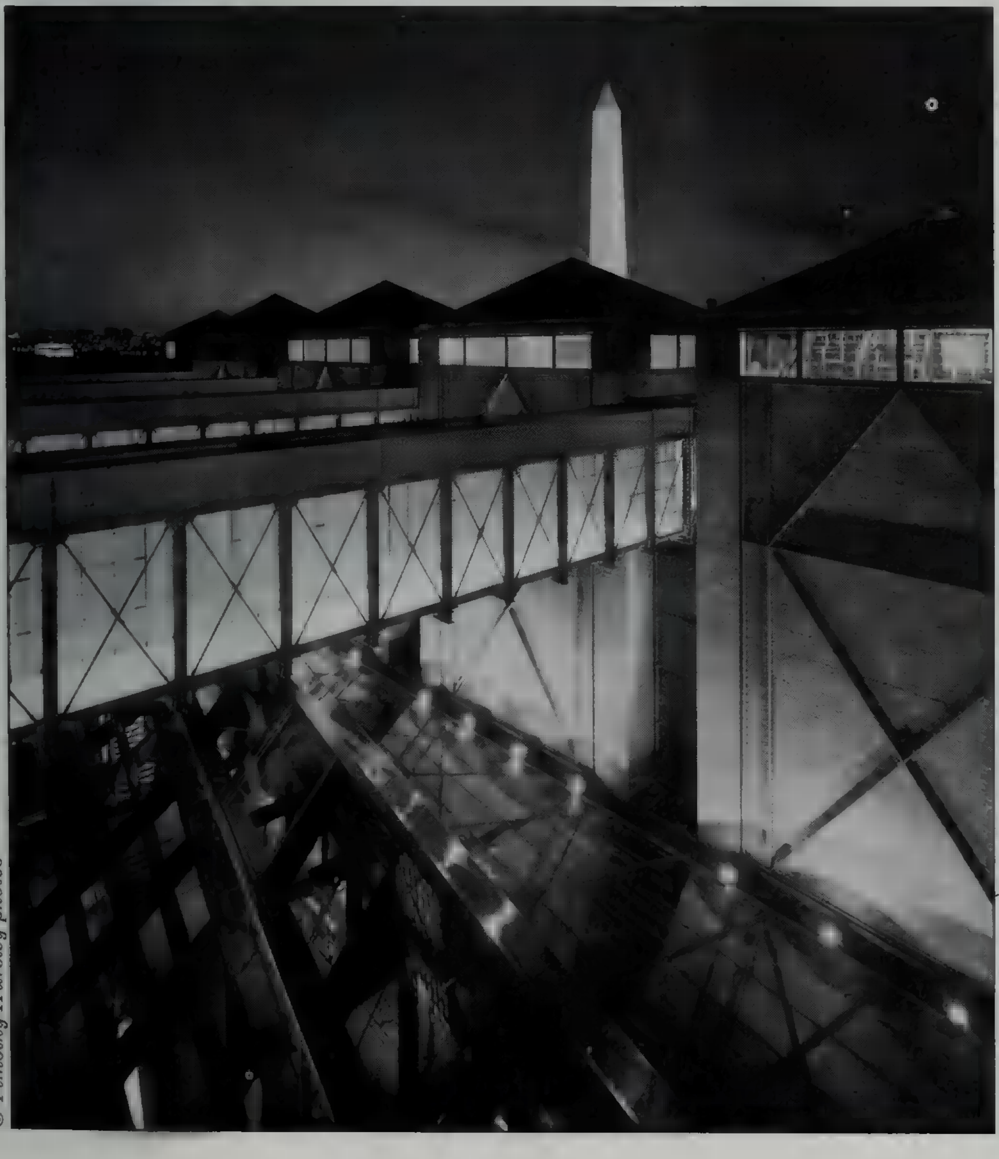
"A PRECISELY CONTROLLED MUSEUM/MEMORIAL THAT EVOKES THE RAW EMOTIONS OF UNSPEAKABLE HUMAN TRAGEDY."

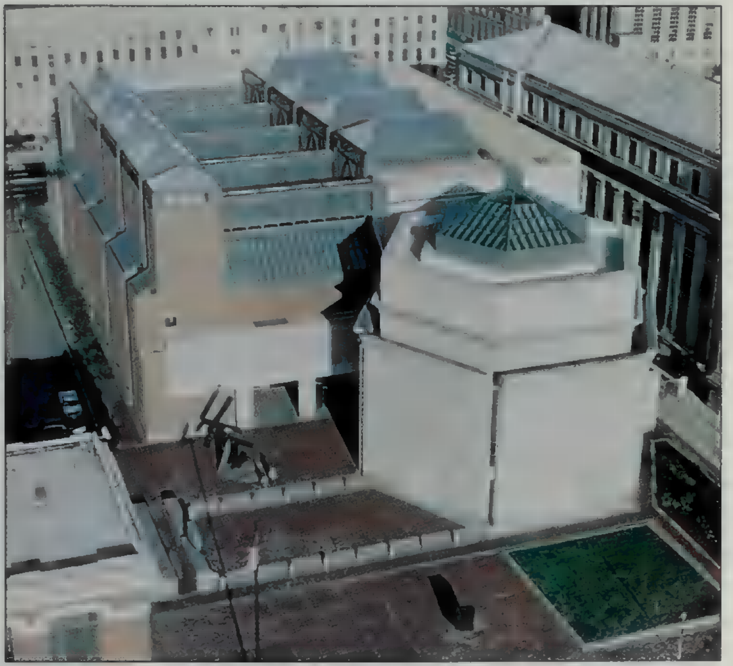
UNITED STATES HOLOCAUST MEMORIAL MUSEUM
Washington, D. C.
Architect
Pei Cobb Freed & Partners
James Ingo Freed, Design Partner
Associate Architect
Notter Finegold & Alexander
Owner
United States Holocaust Memorial Museum

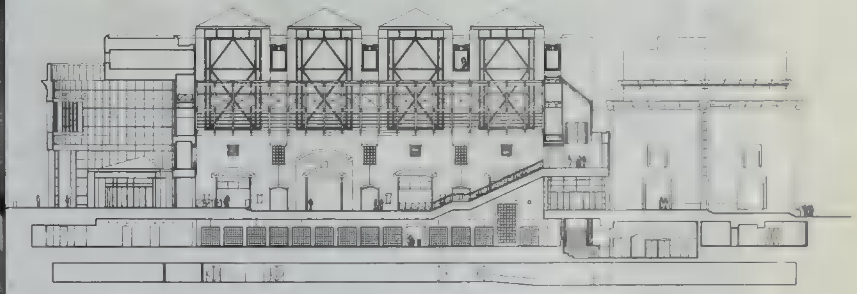
Precisely controlled and often deliberately unsettling, the U. S. Holocaust Memorial Museum "masterfully employs the power of architecture to evoke the raw emotion of unspeakable human tragedy," said the jury. "The brick walls and archways and industrial steel detailing recall the efficiency and precision of the machinery of death. Hauntingly beautiful and sculptural, yet often laden with anguish, sorrow, and remembrance, the building constantly engages all of the senses. The architecture itself reinforces the profound messages of the exhibits, careful not to upstage them while quietly telling its own story. Just a few blocks from America's most significant monuments to freedom and set amid the structures of bureaucracy, this memorial stands as an unflinching witness to the horrors that can be unleashed in the absence of democratic ideals and as a reminder of the necessity of vigilance."

Commented Freed, "This building is not simply a museum, but a living institution dedicated to research, teaching, and the performing arts as well as to contemplation and commemoration. The partial Neoclassical facade is a screen that aims not for synthesis but for spatial and emotional disengagement from the city. The container has been made to merge with its contents so that the building itself engages in a visceral dialogue with the Holocaust exhibitions it contains.

"Internal organization around a three-story, skylit arrival, distribution, and circulation space prepares visitors for the museum experience ahead. There are no literal references to particular places or occurrences from the historic event. Instead, architectural form is abstract and open-ended so that the museum becomes a resonator of memory, providing a stage for introspection rather than a series of specific architectural metaphors. It is a place of remembrance where the past is made a living part of the present in order to protect the future."







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"THE PLAN RETAINS THE INTEGRITY AND SCALE OF THE EXISTING ENVIRONMENT WHILE ADDING SUCCESSFUL NEW USES."

THE CHARLESTOWN NAVY YARD
Boston
Urban Designer
Boston Redevelopment Authority
(for the Charlestown Navy Yard
Master Plan)
Owner
Boston Redevelopment Authority

A successful reuse of a historic naval shipyard and a notable answer to the problem of reusing military installations—a challenge that many more communities are facing or will face in the future," declared the jury. "The Boston Redevelopment Authority took on the long-term management of the shipyard so that it could be redeveloped with a coordinated plan, a plan that preserves historic buildings and maintains the geometry of streets and piers. At the same time, it created housing for a wide range of income levels. The naval yard is still a work in progress, but it is already a substantial accomplishment."

"This 135-acre maritime industrial site is sandwiched between downtown Boston and the residential neighborhood of Charlestown. A strong existing street grid is obscured by years of haphazard construction and seemingly random building additions. Several large empty spaces provide new development opportunities, along with 20 acres of vacant and underused land at Yard's End. One section remains a national park where the U. S. S. Constitution is berthed," said the authority.

Among the urban-design goals and objectives of the authority were:

—Maximize public access from Charlestown to the west and along piers.

—Design a comprehensive open-space system to connect public attractions and take advantage of views and sunlight.

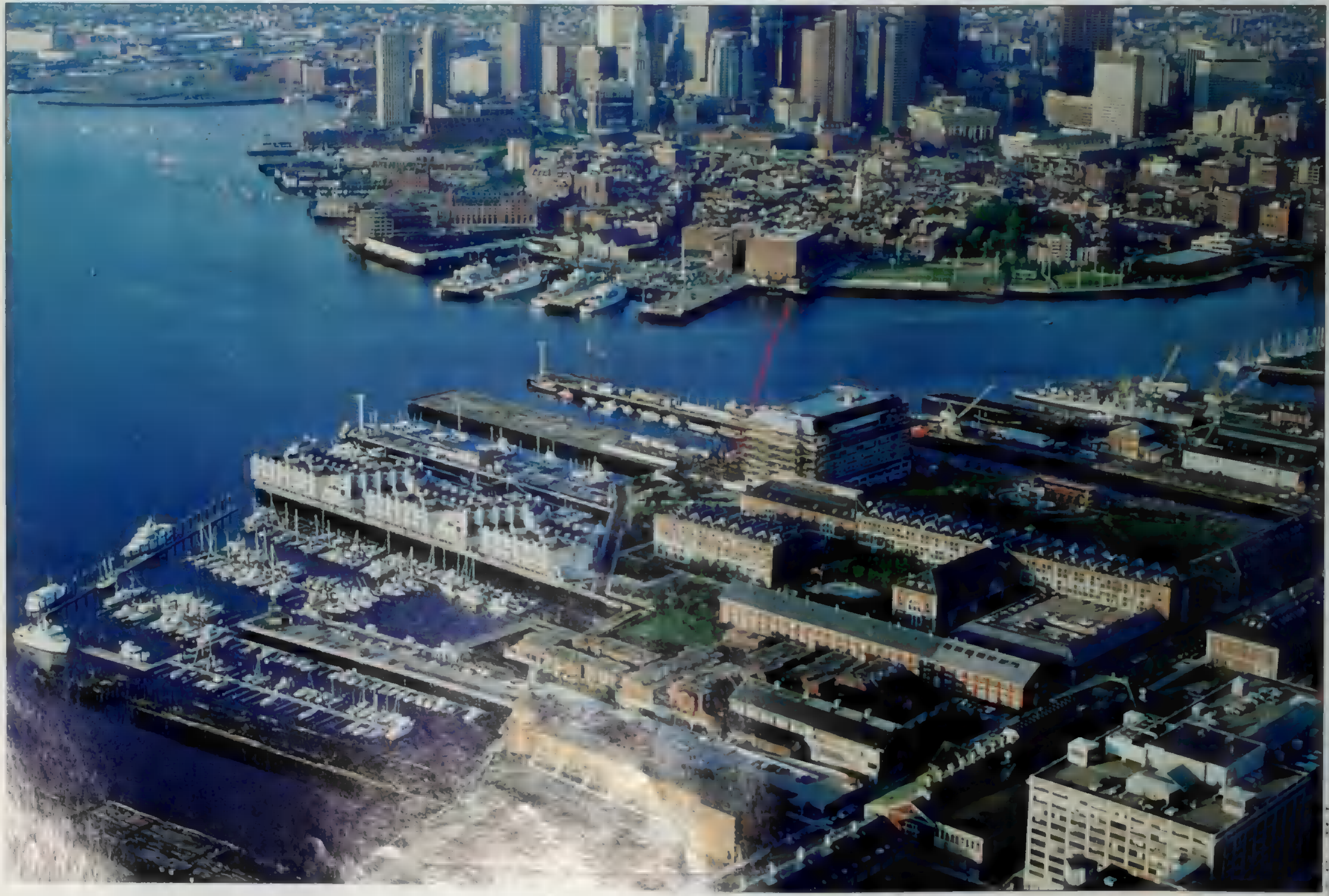
—Develop a street network that can accommodate the demands of tourists, workers, and residents.

—Create a mix of residential, commercial, cultural, and recreational uses.

—Preserve significant structures.

—Stimulate long-term investment.

—Ensure a participatory planning process.



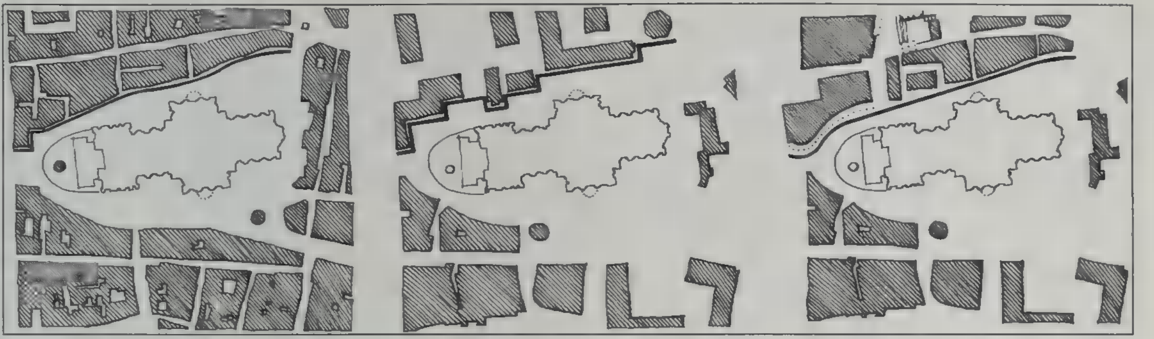
"THE NEW PLAN INTEGRATES MODERN, LARGE-FLOOR OFFICE BUILDINGS INTO A SCENOGRAPHIC URBAN PRECINCT THAT WILL BE A MAJOR IMPROVEMENT OVER THE NONDESCRIPT COMMERCIAL DISTRICT."

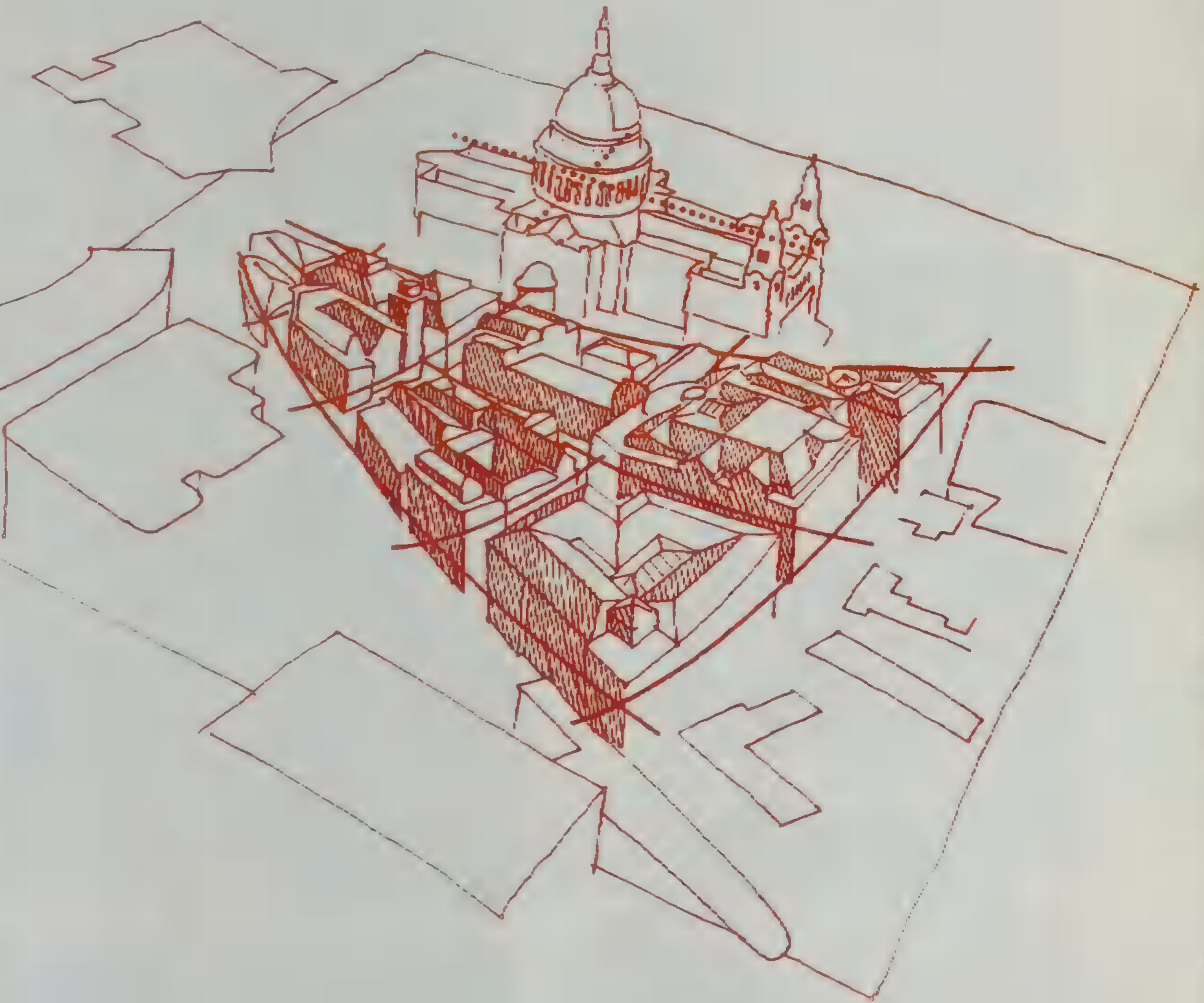
PATERNOSTER SQUARE REDEVELOPMENT MASTER PLAN

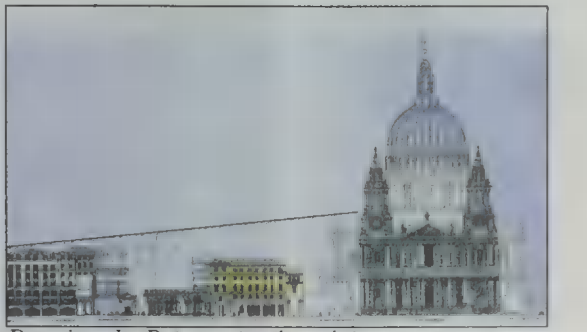
London
Architect
Hammond Beeby and Babka Inc.
Owner
Paternoster Associates
Associated Master Planners and Building Architects
John Simpson & Partners
Terry Farrell & Company
Building Design Architects
Erith and Terry
Sidell Gibson Partnership
Allan Greenberg Associates
Demetri Porphyrios Associates.
RHWL
Winchester Design Ltd.

The jury commented, "The new plan for Paternoster Square integrates modern, large-floor office buildings into a scenographic urban precinct that will be a major improvement over the nondescript commercial district built after World War II. The new plan responds to the presence of St. Paul's Cathedral and creates a pleasing variety of streets and public spaces. The buildings have been planned to revive some traditional architectural ideas at a new scale in ways that will create a sense of identity for the whole district."

Stated the architects, "The Paternoster Square Redevelopment Master Plan addresses a seven-acre district of London in the shadow of St. Paul's Cathedral. The plan reinstates a traditional pattern of streets and a pedestrian scale and density of building characteristic of Paternoster Square for centuries before wartime devastation in 1940. A rigid planning grid imposed on Paternoster Square during reconstruction in the 1960s is replaced by a more harmonious network of streets and lanes and a variety of buildings appropriate to London's historic center. Also reinstated is a fitting context for Wren's cathedral, which had lost its scenographic and hierarchical importance with postwar development. The primacy of the cathedral is reestablished with all the amenities of the development arranged to enhance the sacred precinct."







Drawings by Paternoster Associates

"THIS URBAN OASIS TRANSFORMS AN UNFRIENDLY SPACE INTO AN INVITING PLACE ATTRACTING CONTINUOUS ACTIVITY AND PEOPLE."

POST OFFICE SQUARE PARK AND GARAGE

Boston
Urban Design Team
Ellenzweig Associates Inc. Architects;
The Halvorson Company Inc.; Parsons,
Brinckerhoff, Quade & Douglas Inc.
Master Planner
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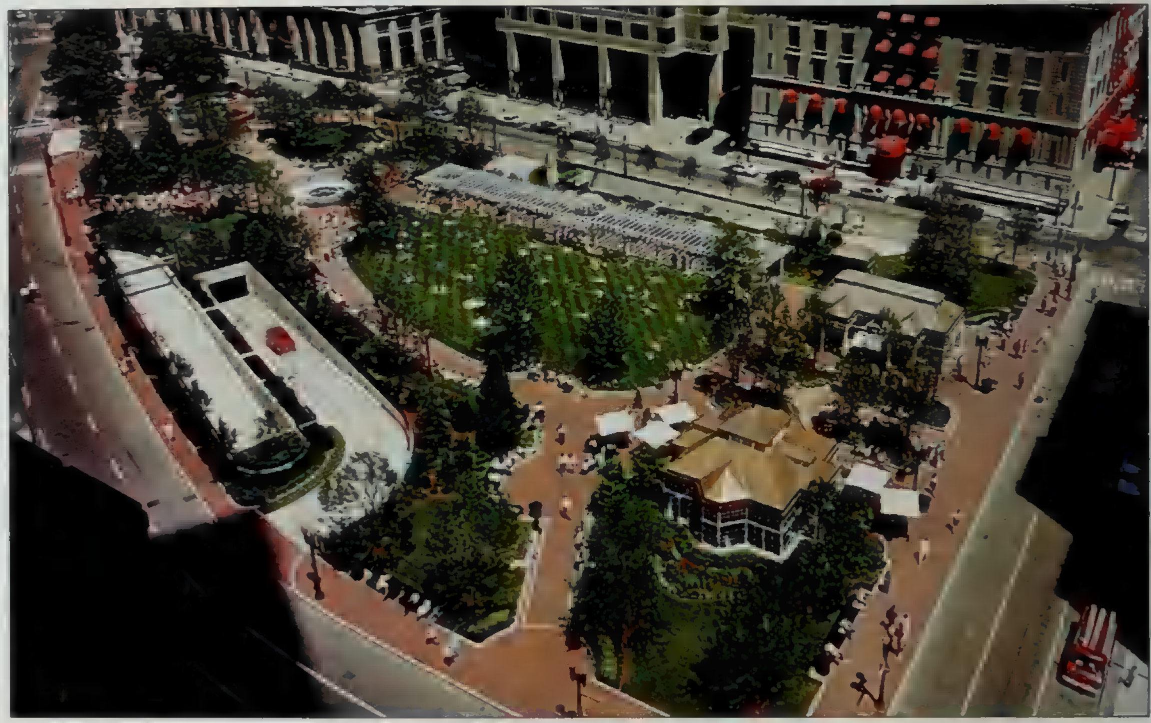
Post Office Square Park is the highly practical result of a seemingly impractical idea: "to replace a utilitarian but uninspiring parking garage with a friendly urban park, burying all the necessary parking underground," said the jury. "A private consortium of neighboring property owners financed the $50-million project in cooperation with the city, which will end up owning the project when the bonds are paid off. The urban oasis is planned generously with trellis and kiosk buildings to mediate between the park and the massive surrounding buildings. Post Office Square Park has transformed successfully an unfriendly urban space into an inviting place attracting a great deal of continuous activity and people."

The designers noted that "The Post Office Square Park and Garage rescued the Financial District from the blight imposed by a deteriorated 1950s structure, repairing the urban fabric in this tangle of busy streets and high-rise buildings that used to seem disconnected and disorienting. Concealing an elegantly designed underground garage for 1,400 cars, the 1.7-acre park is a true celebration of city life in terms of place and activity. It provides a defined center for a previously unfocused area of the city and imparts a strong sense of community to a formerly bleak downtown area.

"The governing vision was to create an urban living room, a welcoming gathering place for downtown workers and tourists."



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"A QUIET OASIS THAT RESPECTS THE PREVIOUS CONFIGURATION OF PUBLIC SPACE, ENHANCING WHAT WAS ALREADY THERE."

BRYANT PARK AND THE NEW YORK PUBLIC LIBRARY TERRACES

New York City

Landscape Architect and Architects

Hanna/Olin, Ltd.; Davis Brody & Associates; Hardy Holzman Pfeiffer & Associates; Kupiec & Koustomitis

Owners

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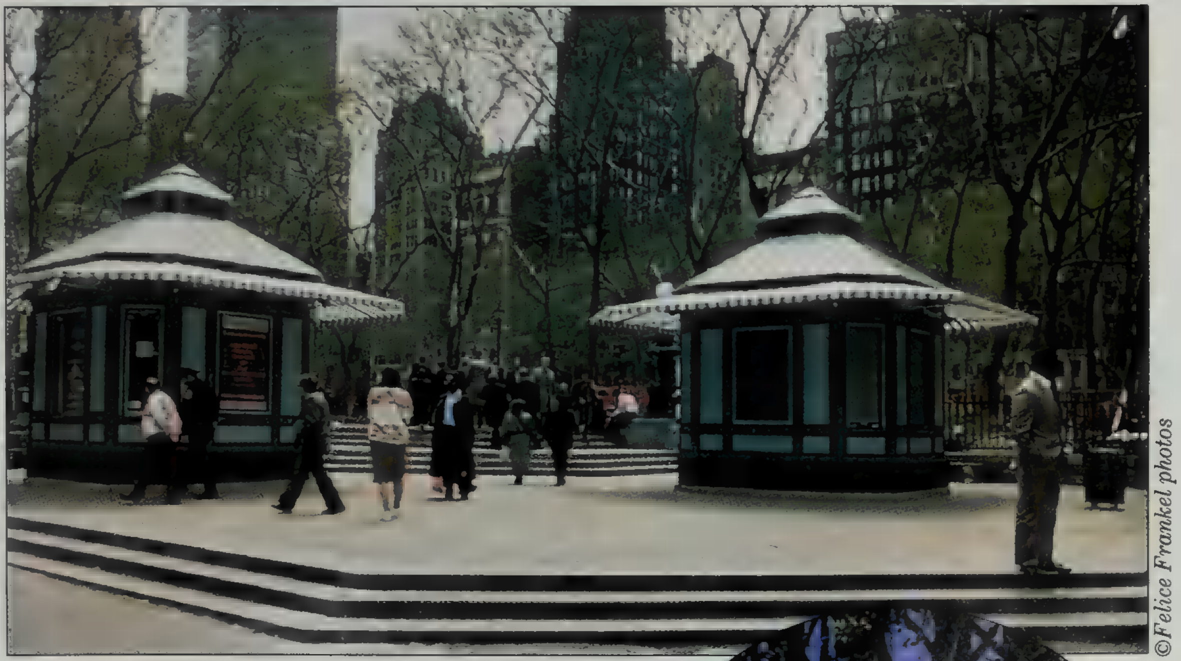
The New York Public Library
New York City Department of Parks and Recreation

The jury said, "Redesign of Bryant Park and the New York Public Library terraces accommodates the expansion of the library with underground book stacks while recapturing a public space that had been taken over by drug dealers. Today it is a quiet oasis, but not so quiet that people are afraid to go there. The new design respects the previous configuration of public space, making only subtle but all-important adjustments, enhancing what was already there—judicious placement of kiosks—and animates the public space."

The architects and designers wrote, "The central urban design tenet applied at Bryant Park and the New York Public Library's Fifth Avenue Terraces is the importance of a strong public realm—carefully scaled and accessible open space, vigorous planting, and detailed fixtures inspired by the local character and climate. This vision of a common ground—that not only sustains commerce and culture in a city but that gives its diverse residents a shared sense of pride and ownership guided the design. The history of the block demonstrated that improved aesthetics alone could not rescue the park from the threat of decay and dereliction; it had to function first as a social system. Therefore, the planning process stressed security, maintenance, and events programming. A means to provide ongoing public and private funding was secured by organizing a private corporation to manage the park and imposing a special business tax—11 cents a year on each square foot of business space."



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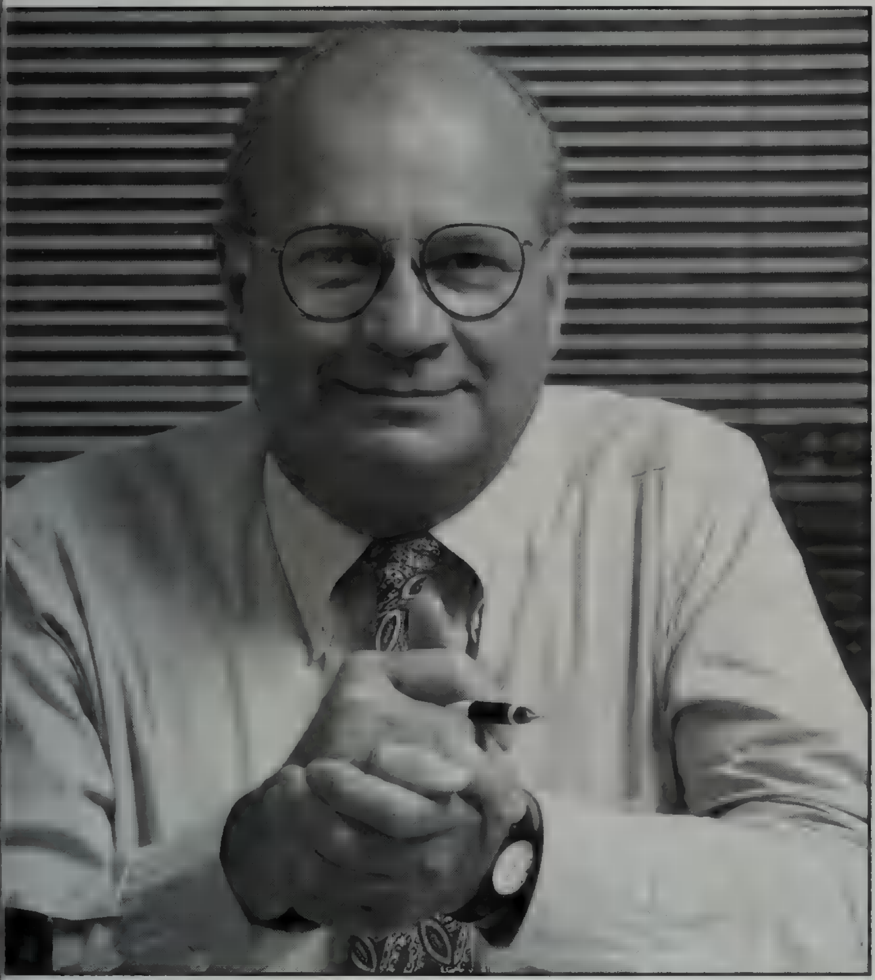

Peter Steffian, FAIA, is a partner of SBA/Steffian Bradley Associates Inc., a Boston-based architecture, interior and urban design firm founded in 1932. Peter is past president of the Massachusetts Council of Architects and a past director of the Boston Society of Architects and is chairman of the Board of Registration of Architects for the Commonwealth of Massachusetts. We value our relationship with his firm and appreciate his willingness to talk to you about us.

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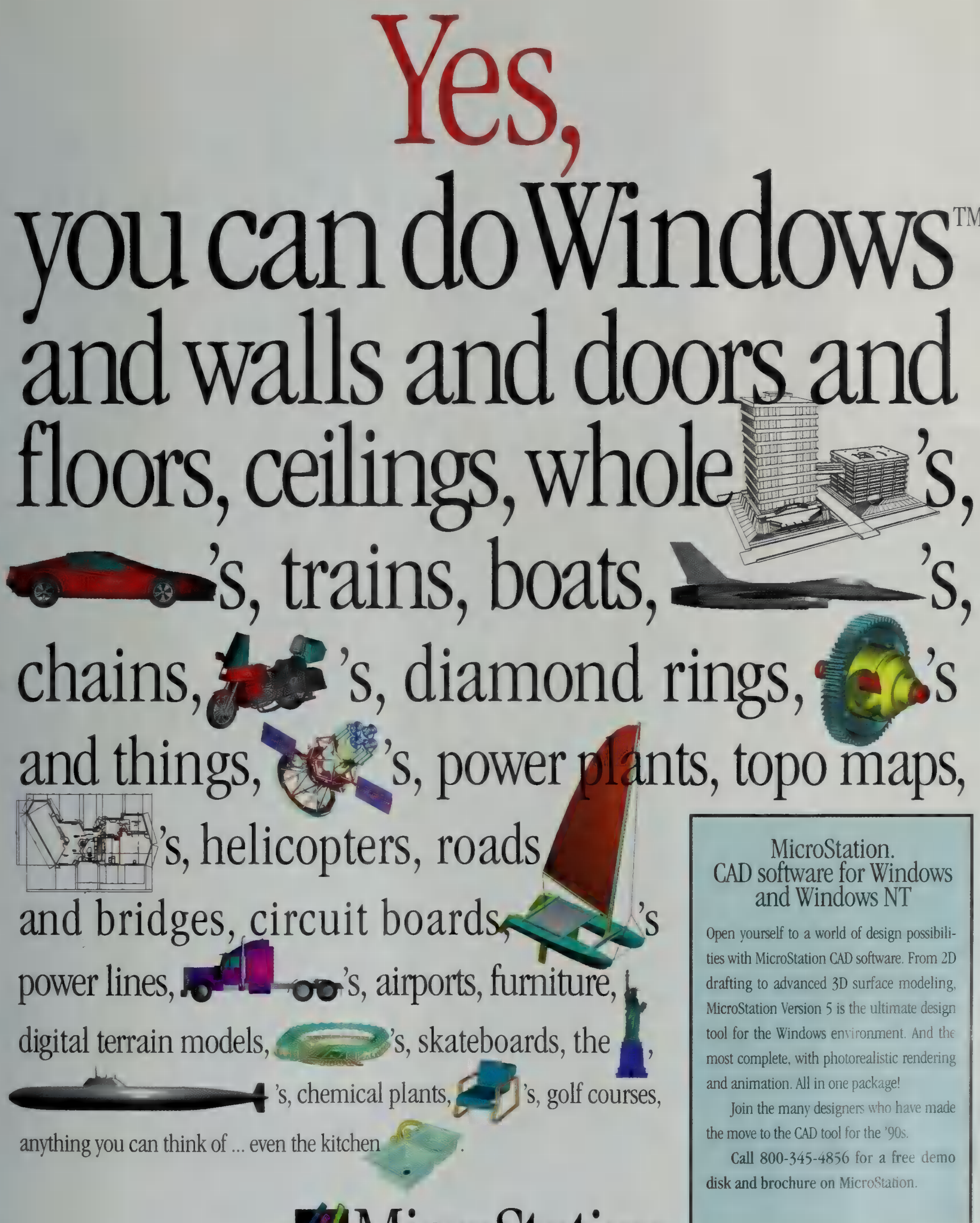

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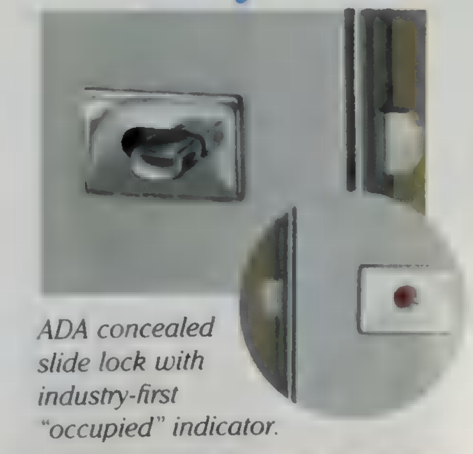

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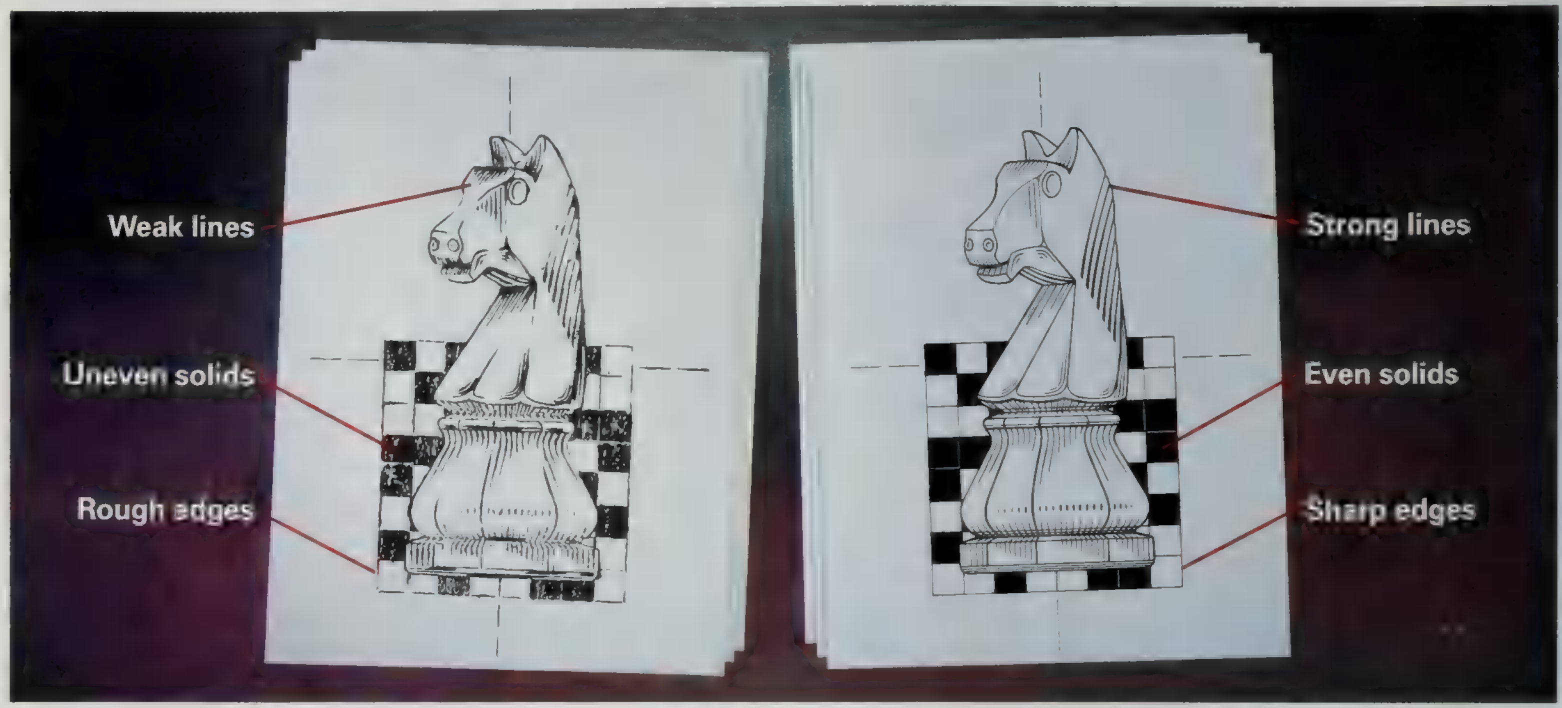

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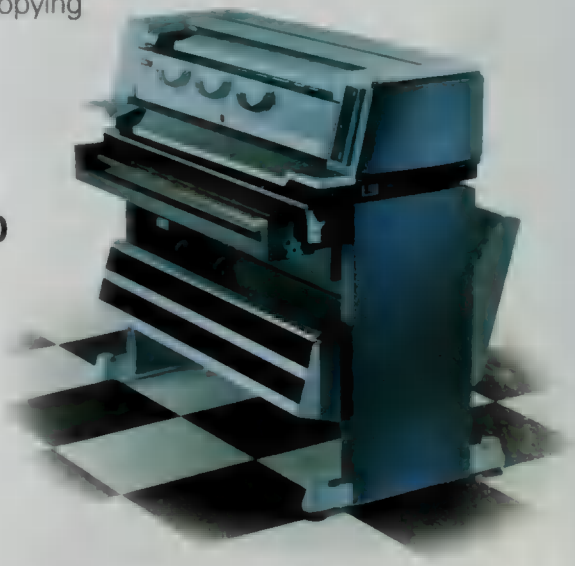

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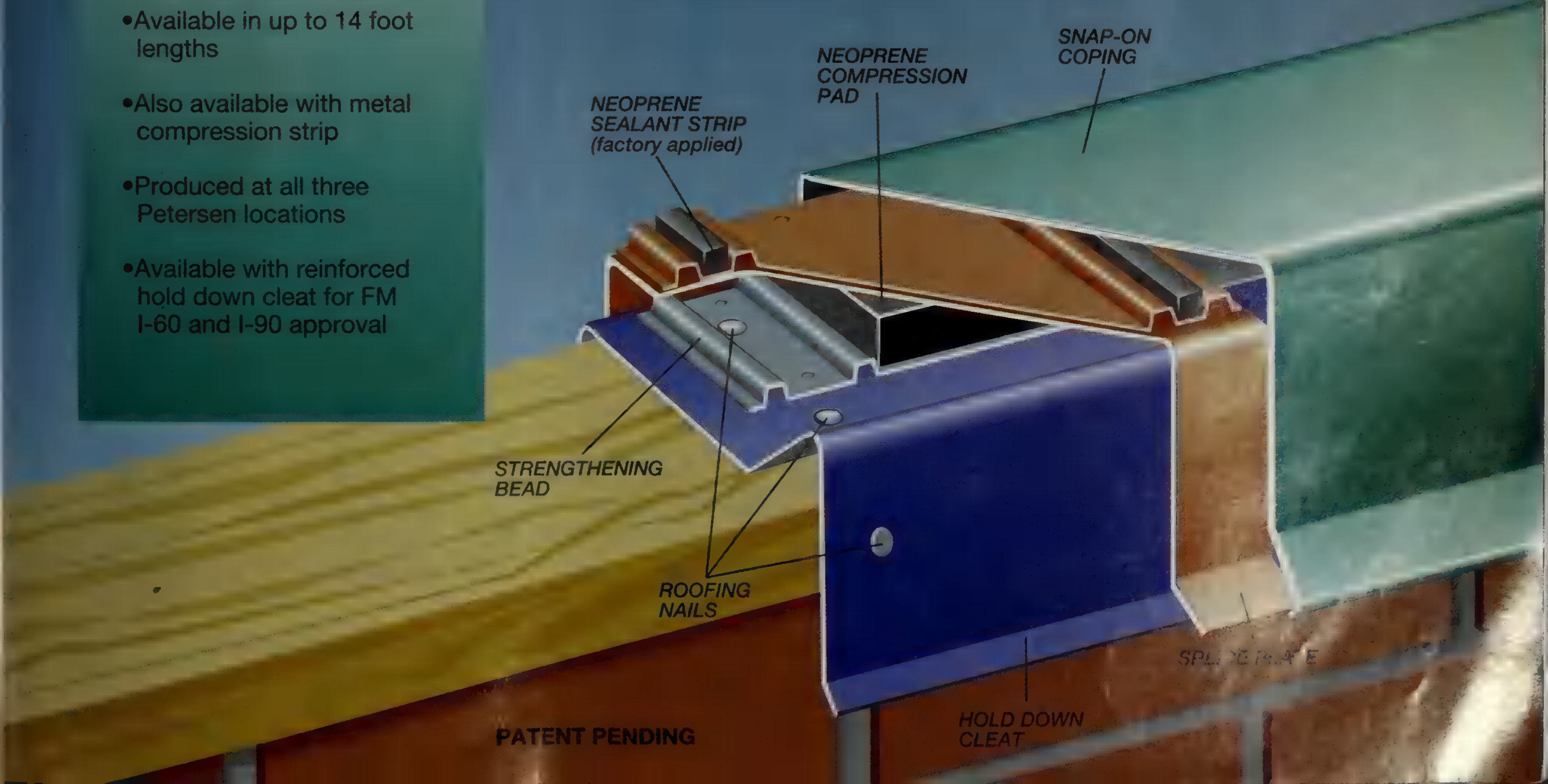

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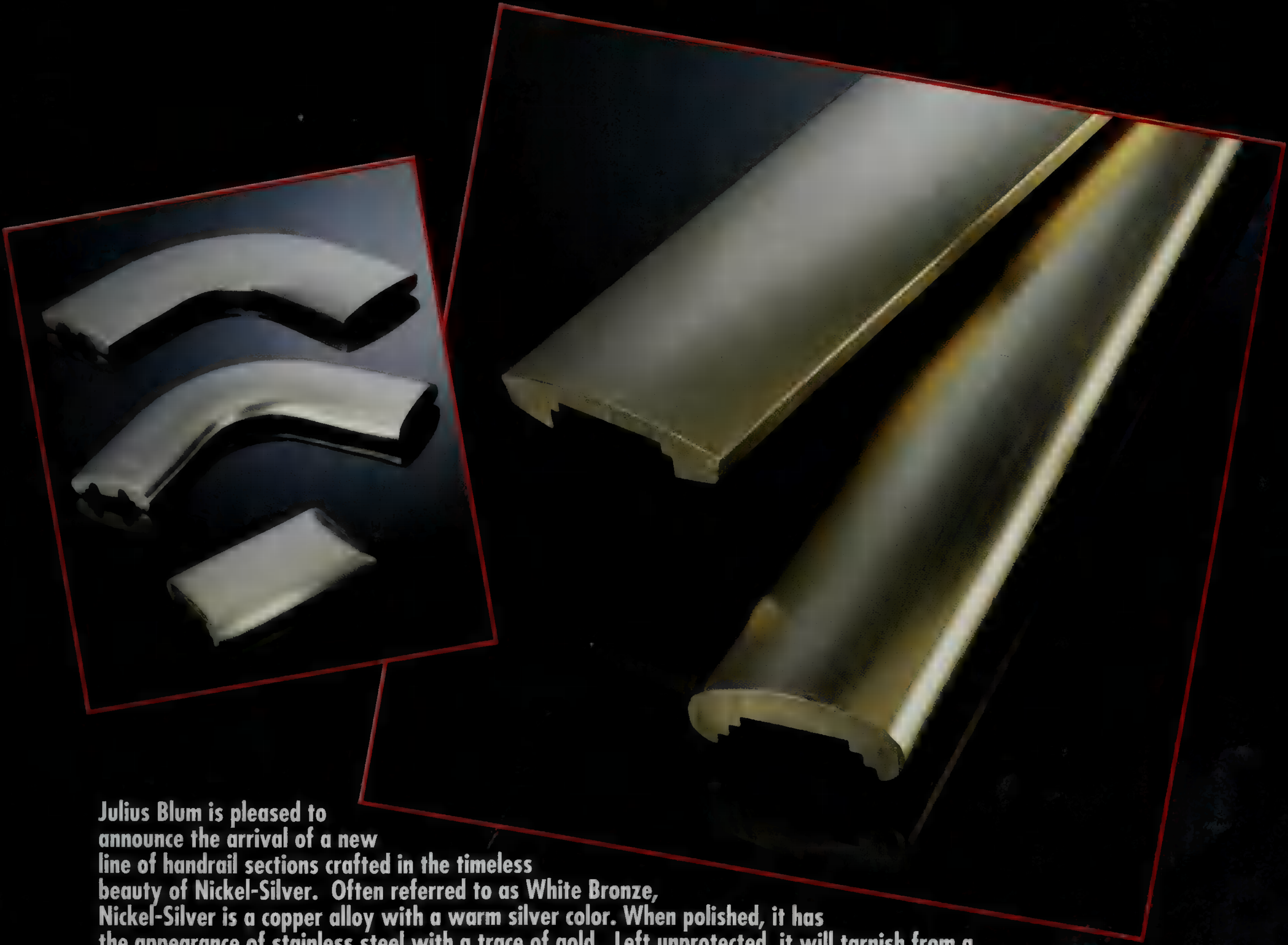

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ARCHITECTURAL RECORD 2/1994

Building Types Study 713/Adaptive Reuse

Three issues affect successful conversion of existing buildings to new uses:

- Compatibility of the building with a new program.
- The economic feasibility of making a conversion versus new construction.
- The commitment of an owner even when total replacement might cost less.

The first issue is crucial to any reuse project. A new auditorium will probably not fit easily into a building designed for apartments. Nor will a massive corporation's headquarters fit into most houses. Whether the other two issues can be resolved depends on the reasons for launching the project. If profit is the motive, conversion costs are as crucial as fit. If a building's existing construction type or structural system requires total alteration to support a new use, there may not be enough original building left to save. If preservation is the motive, the issue becomes more complex. The promise of success is best when suitability, feasibility, and preservation converge in one project.

On the following pages are examples of successes of all kinds. An aviary becomes offices with surprising ease. The conversion of a hotel into assisted housing shows the cost benefits of a compatible program. A burned-out university classroom building offers an opportunity to redesign the inside to fit the requirements of offices. A garage becomes a photo studio with minimum change and cost. A former tobacco warehouse now houses a shopping complex. And a once-derelict office building becomes a cheerful clinic for children. *C. K. H.*

Manufacturers' Sources listed on page 137

More Than Preservation

"Preservation's back on track," says *Preservation News* executive editor Arnold Berke, referring to the Pennsylvania Supreme Court's recent reversal of its 1991 ruling that Philadelphia's landmark designation of the Boyd Theater constituted a taking of property [RECORD, January 1992, page 33]. But these days preservation of landmarks is just the tip of the iceberg. Though not *every* distinguished building in the U. S. will survive indefinitely, it is becoming increasingly likely that most will. That no longer seems the pressing issue. The real issue is the effective recycling of built resources—a vast stock of underutilized buildings that, distinguished or plain, is increasingly seen as having more potential than new development sites.

The evidence is in the healthy statistics (see F. W. Dodge's projections, opposite page). But even these figures may undercount renovation's real value by some 25 percent, says Dodge's Robert Murray, vice president, economic affairs. Not included are countless projects that cost less than $1 million, ranging from commercial fix-ups to major single-family renovations. He does not, however, back the AIA's prediction there will be more rebuilding than building by the year 2000. "The market for new construction will be too strong by then," he says. Nonetheless, the projected growth for rebuilding is impressive.

Why renovation is popular

- *The psychological ingredient.*

Building rehabilitation has entered the national vocabulary as a user-friendly word, "rehab." Surrounded by accelerating change, both in technology and society, people find comfort in familiar touchstones. Advances in national and local preservation policy during the past three decades, despite setbacks, testify to the public's desire to slow change, and preserve the past. The growing activism of community-based organizations (recently including minority ones) that resist wholesale neighborhood change and sometimes—to developers' and planners' dismay—any change at all, is another indicator.

- *The conservation ingredient.*

Environmentalists like recycling buildings. Just as reusing paper and bottles makes new use of finite resources, buildings also contain "embodied energy" [RECORD, January 1993, page 72]—the energy [illegible] construction now "stored" within them.

- *The [illegible] ingredient.*

[illegible] owners are finding that saving a [illegible] more likely to get the approval of [illegible] conservationists than new construction. [illegible] economic sense—as much as a 16 percent savings [illegible] for a gut rehab and an 18 percent savings in construction time over tearing a building down and building a new one of similar size, says Donovan Rypkema, a principal of The Real Estate Services Group in Washington, D. C. Some architects have found even larger savings (see *Perfect Union*, page 94). Federal tax incentives offered first by the Tax Reform Act of 1976 and later by the Economic Recovery Tax Act of 1981 also sweetened the pot for developers. While the Tax Reform Act of 1986 reduced these benefits, they are still available [RECORD, January 1992, page 29].

Facing new facts

Why would an owner want to tear down a building and rebuild one of similar size? In this overbuilt decade, especially in office and multi-family construction, owners often want reduced financial exposure even while they seek improved income or quality of use instead of simply more floor space. Does rehab meet these ends as effectively as new construction? It depends on the match of existing building to new program. If the shoe fits and reconditioning doesn't cost too much, it's probably wearable. Theodore Prudon, a principal of Swanke Hayden Connell Architects, points out that real problems may be found in the structure (including seismic safety), fire and life safety, and accessibility. If these issues can be resolved economically, other popular arguments against rehab are easily overcome:

- Most older buildings' systems *are* obsolete. "In any major project, they are usually replaced," points out Prudon. They are a minor investment relative to the value of solid construction.
- Despite assertions that floor layouts of older buildings are inefficient, "studies show that there is little, if any, difference in net-to-gross ratios between new buildings and those over 50 years old," reports Rypkema. While floor areas may be limited in size and unsuitable for the offices of large corporations, the average office tenant leases only 10,000 square feet.
- Rents in older buildings may indeed be lower, but not much, says Rypkema. "Retail rents will range from 95 to 100 percent of those for competitive new space," he observes.

From fix-up to virtual reconstruction

Those who apply for federal-tax relief in return for conforming to National Park Service guidelines for restoration report much greater savings over new construction than those for gut rehab—up to 50 percent. But they are talking about much less intrusive changes and using far more of the original fabric. Indeed, municipalities set limits on how much of a building's value can be replaced before owners must fully comply with codes for new construction—often 50 percent. This limit, of course, is the point at which—unless the building is a landmark requiring careful concealment of new exiting, mechanical, and structural features—a gut rehab will usually occur. Then, it will usually be more economical to reuse structure and exterior walls and replace the interior with new construction. "Officials are then looking for full compliance," reminds Prudon. "No longer will they accept mitigation."

As the preservation of landmarks moves into the mainstream, the focus is shifting to conserving the vast stock of under-utilized buildings of every stripe. Finding new uses and converting such buildings is often a complex process.

To qualify for federal-tax preservation incentives, owners originally had to preserve 75 percent of original exterior walls. The only change to Park Service guidelines since they were written is the removal of this requirement when applied to "certified historic structures," reports department chief of technical services, Ward Jandl. Indeed, the rule has been difficult to interpret because of the large number of buildings, such as party-wall lofts, that do not fit the freestanding model the guideline's drafters had in mind.

Will the original, far more generous tax incentives ever be restored? Jandl remains hopeful, and points to bills introduced almost every year to accomplish that purpose. Berke is more pragmatic: "Preservationists are realizing that, in a tight fiscal climate, the original tax credits won't be restored," he says. "Those applying for credits will have to take what they can get." Prudon sees a silver lining in this: "Before the reduced incentives in the 1986 Tax Act, developers were going around like maniacs converting buildings to all sorts of marginal uses, which meant, at the end of the day, those buildings were not saved. How many upscale cutesy boutiques do we need?" he asks, referring to the retail-complex conversions of factories and warehouses that were once the rage. The current overbuilt market will demand much sounder feasibility analysis in the future. Concludes Prudon: "Buildings can only be saved by the same spirit that built them," which, in the case of commercial buildings, means "desire for profit."

Reuse's special problems

Conventional wisdom holds that reuse makes the most sense when the new use is closest to the original one. Berke says this isn't always true: "Sometimes the most successful reuses are the most radical." He points to the ongoing conversion of such buildings as factories and schools to housing, buildings that were never intended for domesticity, but that were built with such flexible structures as to produce unusual, characterful apartments. He is more dubious of conversions that seem inappropriate in symbolism (a church into a nightclub) or in character (a theater into offices by inserting many floors), but observes that, when a building has no other users, such conversions can be better than destruction.

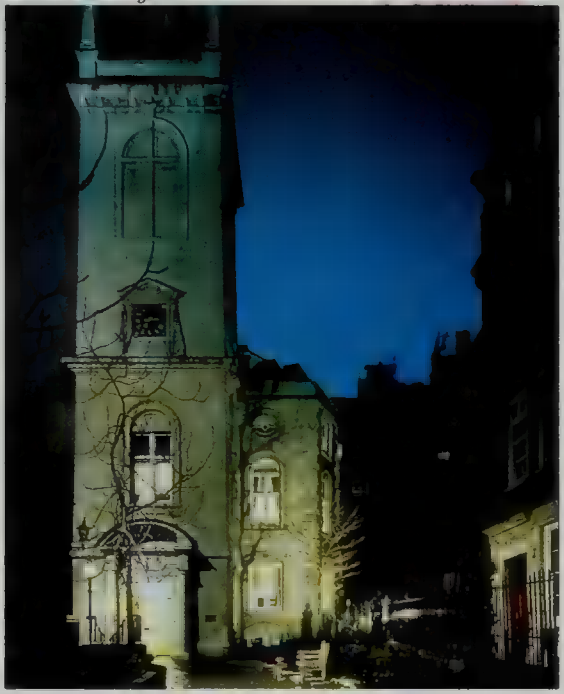
Prudon is more strict in his standards, despite his firm's seemingly startling project in London (see Stretching the Limits, right). To him, appropriateness is a paramount issue. "How far do you go in intervening in the original structure before you have removed the parts that made it interesting in the first place?" he asks. "The criterion should be that the new use is not the *end* use"—that the building is not so altered that it cannot go on to another useful life in the future. Prudon commends the European practice in which new uses evolve over centuries. *Charles K. Hoyt*

Rehab's projected growth

1993: *$23.1 billion*
1994: *$24.9 billion*
1995: *$26.9 billion*
1996: *$28.3 billion*
1997: *$30.1 billion*
1998: *$31.1 billion*

F. W. Dodge

Richard Bryant



Stretching the limits. *Swanke Hayden Connell Architects' conversion of Christopher Wren's Grade I listed St. Olave's Church into London offices for U. S. lawyers Sullivan & Cromwell may seem radical. But the building had been divided into floors in the 1880s. Conversion paid for extensive exterior restoration.*

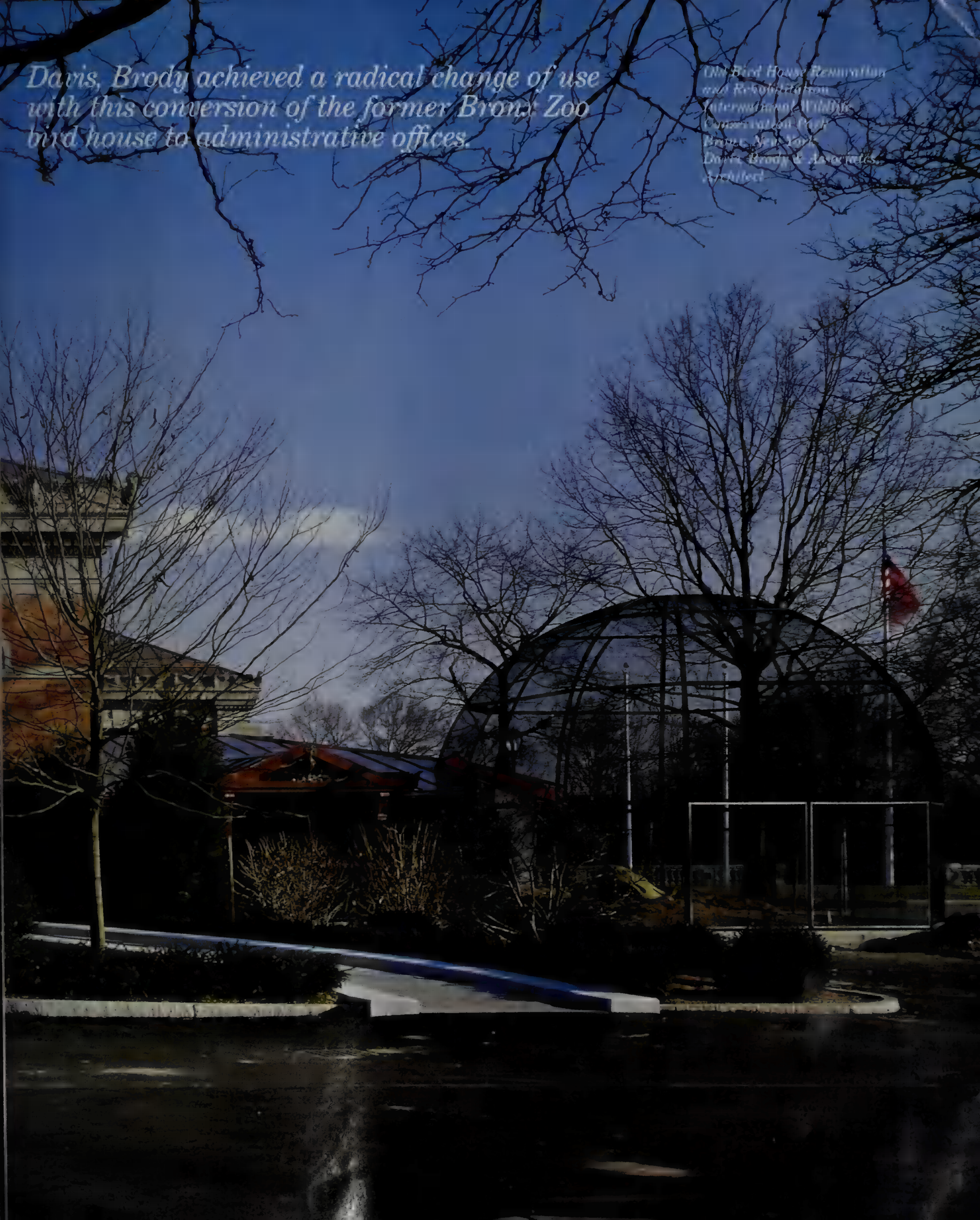
Catherine Bogert

Keeping it basic. *A garage becomes photo studios with only the sparest of changes (see story, page 108).*

Re-feathering the Nest

Davis, Brody achieved a radical change of use with this conversion of the former Bronx Zoo bird house to administrative offices.

Old Bird House Renovation and Rehabilitation
International Wildlife Conservation Park
Bronx, New York
Davis, Brody & Associates, Architect



"The building might have been built for any use," says project architect Helen Cohen of Davis, Brody & Associates, pointing out that the Old Bird House, at the since renamed Bronx Zoo, contained long-span, full-height spaces. Such flexible interiors characterize many utilitarian turn-of-the-century Beaux-Arts buildings designed by architects who focused their formal-compositional efforts on exterior elevations. These buildings were also usually built to last. Indeed, so sturdy was the masonry and steel-truss construction of the Old Bird House, as it is still called, the steel-beam and metal-pan floor needed for additional office space was inserted between the original floor and roof with the addition of only minor added reinforcement to basement piers under the new steel columns. At the perimeter, the architects supported the new beams directly on the exterior masonry-bearing walls.

When building functions change as much as they did here, deciding which architectural elements to retain can become complex. The new program called for 24,000 square feet for zoo offices to house public affairs, accounting, personnel, and other administrative functions. The existing building provided less than half the required area, so the lofty spaces where viewers once walked around towering central exhibition cages had to go to accommodate a new second floor. Davis, Brody found more space outside the masonry walls, constructing low office wings where outdoor cages were once located. They retained the Bird House's original appearance by adding an aviary-exhibition cage (foreground of photo opposite, below) parallel to one exterior wall, with a domed structure at one end. The dome replaces a similar original cage and shares an attribute of all new animal enclosures in the park: greater visibility of exhibits through "zoo-mesh," an almost invisible stainless-steel netting stretched on thin frames.

Davis, Brody retained many original elements of the interiors, including the exposed steel trusses. These, after sandblasting and painting, afford the new upper floor a sense of the original space—both in construction and open character. Office partitions are topped with glass privacy walls so that the trusses' full spans can be appreciated. Drywall was applied over the original exposed brick walls to cover mechanical and electrical lines and improve insulation; it stops short of window edges to reveal the original finish. The second-floor windows were originally clerestories at the top of the tall exhibition spaces and initially seemed too short to provide a view. However, this low position provides fine eye-level views to those seated at desks. Details such as the specially designed metal-halide light fixtures add to the building's Neoclassical character without aping it. So, too, does custom-made interior trim, including stair railings, made of painted poplar and mahogany-stained oak. Both client and architect opted to use only natural *and* unendangered materials.

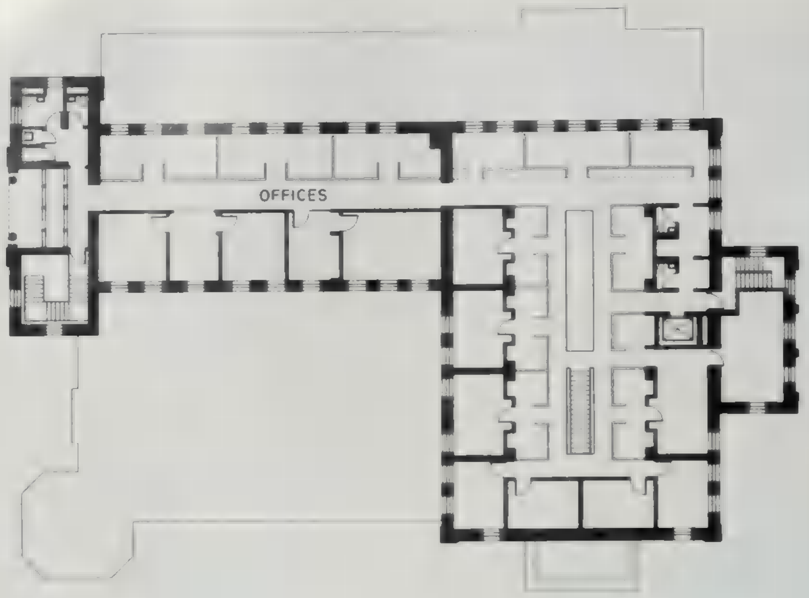
Without question, the exterior needed restoration. Although not an officially designated landmark, the Bird House is part of a six-building complex designed around a formal courtyard by Heins & [illegible] All buildings are or will be undergoing renovation [illegible] park realizes new exhibition concepts, expands [illegible] involved with animal conservation [illegible] architects' original report states: "It [illegible] history and integrity of the [illegible] design." The clients have [illegible] to heart. *Charles K. Hoyt*

Up Close

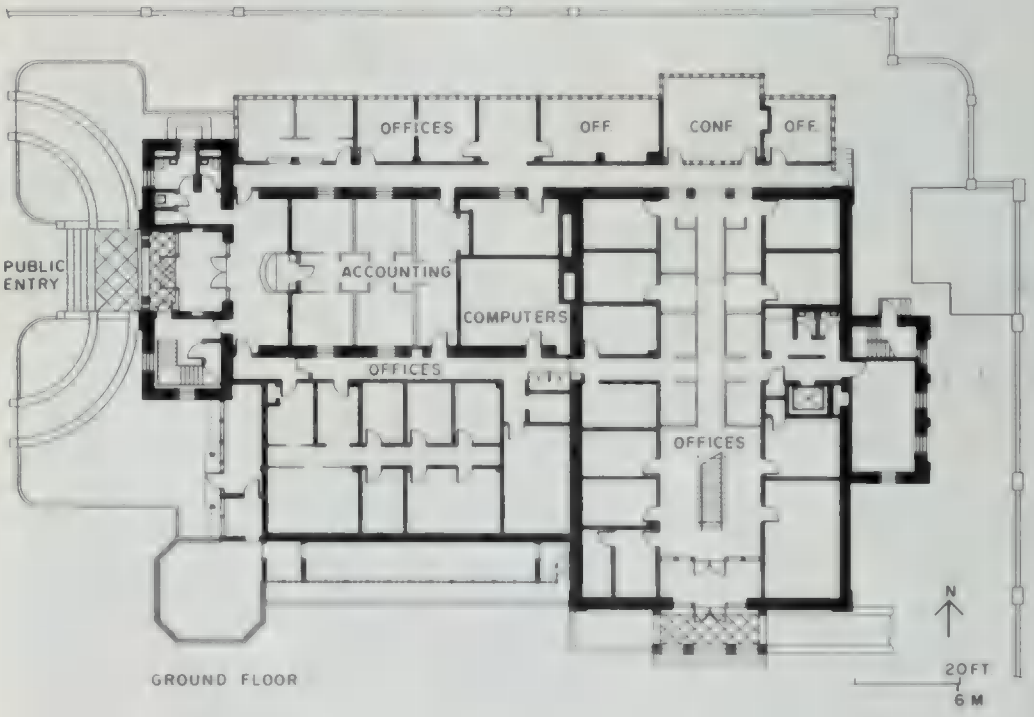
More than just cleaning. Despite the building's basic sturdy masonry-wall construction, cast-stone and terra-cotta decorative elements had succumbed to the typical cycle of water penetration, freezing, cracking, and deterioration of these materials. The copper roofs and skylight framing had corroded beyond repair. The terra-cotta frieze of birds was removed to aid replacement of the deteriorated concealed gutters behind it that had caused many water-seepage problems. Artisans from Building Conservation Associates provided new frieze anchors, repaired and recast damaged and missing wings, beaks, and whole bodies so skillfully that it is now difficult to tell old from new. They also integrated the original copper peacock over the side entrance (photo opposite, bottom) into a new copper pediment so that the whole assembly of elements appears original. The architects saved the cast-stone balustrades along the north and east terraces when possible and interspersed them with matching ones to avoid a jarring contrast between whole sections of old and new. "The zoo's maintenance department keeps a whole storehouse of these balustrades," explains project architect Helen Cohen, pointing out that such replacements are a constant safety challenge even on those buildings not now under restoration.

© Peter Aaron/Esto photos

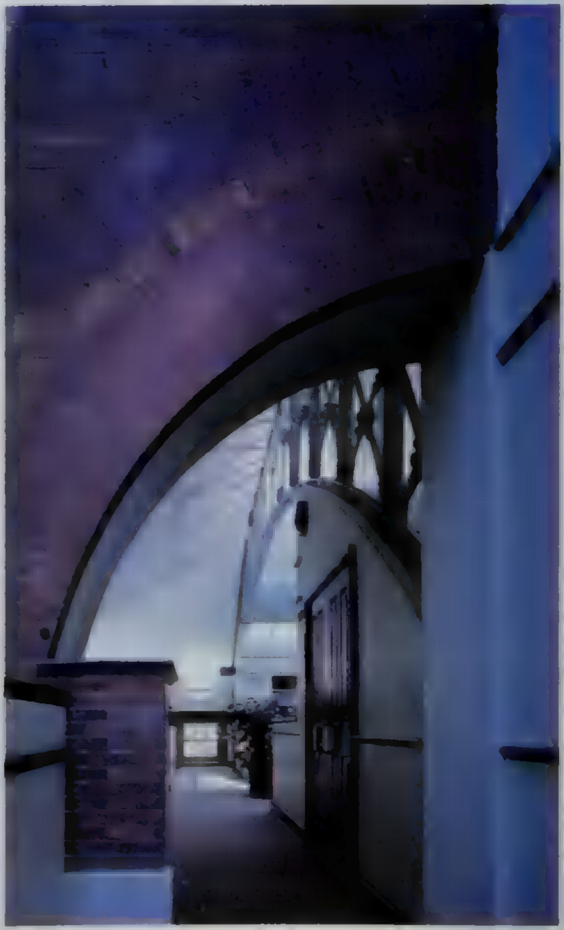
So skillfully did the architects design the new curved handicapped ramp on the main entrance (preceding page) that, despite its small scale, it appears to be a carriage drive. While they copied original railings for another ramp (photo opposite, top), code requirements restricting the rail diameter to 1 1/2 inches for gripping ease meant they could not possesss the original's hefty profile.



SECOND FLOOR



GROUND FLOOR



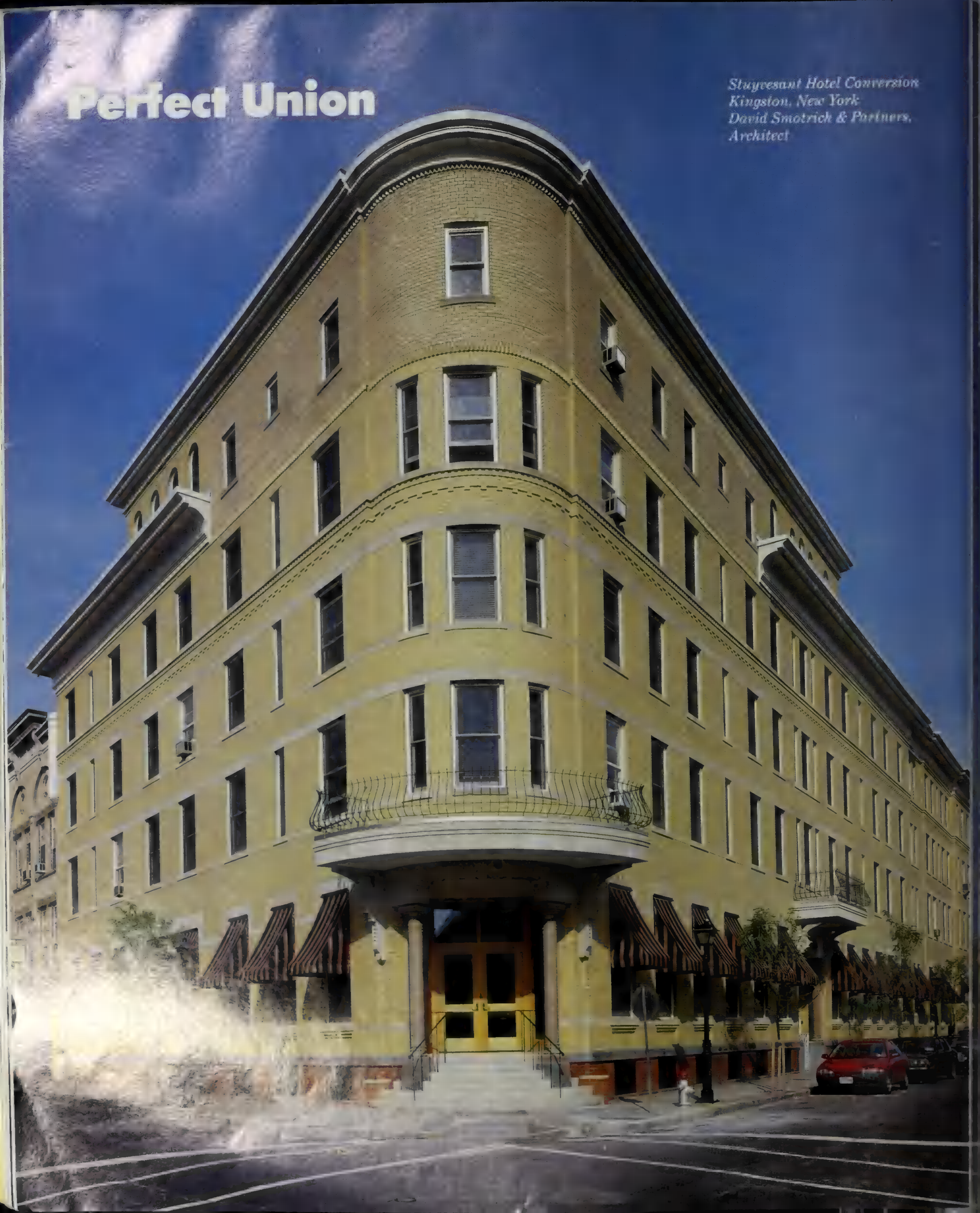
A conference room replaces original cages (top photo, this page). The character and structure of the original space are best understood on the second floor (photo opposite) where the original steel trusses are exposed full length.

[illegible]

[illegible] International Wildlife Conservation Park (formerly the Bronx Zoo)
Architect: *Davis, Brody & Associates—Sam Brody, partner-in-charge; Michael DeCandia, project manager; Gerald Olanoff and Helen Cohen, project architects; Nat Hoyt, John Torborg, Peggy Tasker, Brian Sweny, Paul Carr, project team*
Engineers: *Goldreich, Page & Thropp (structural); Cosentini Associates (mechanical)*
Consultants: *Hanna/Olin, (landscape); Building Conservation Associates, Inc. (interior restoration); Cosentini Lighting (lighting); Gleyen Hardward (hardware)*
General Contractor: *CM-AJ Contracting*

Perfect Union

Stuyvesant Hotel Conversion
Kingston, New York
David Smotrich & Partners, Architect



The conversion of Kingston, New York's once derelict 1910 Stuyvesant Hotel into apartments is, first, a natural fit of old and new functions with similar spatial requirements. This allowed the architects to retain the flavor and some of the fabric of the original interior. Second, the project economically provides housing for the disadvantaged, and revitalizes the local community.

The program called for 40 one-bedroom units to house a mix of elderly, handicapped, and mentally disabled tenants. With only single-person occupancy planned, apartment-space needs would be modest. Hence, architects David Smotrich & Partners could retain the original masonry bearing-wall construction without radical changes, and keeping the original double-loaded-corridor worked well for the conversion, despite a limited typical total floor width of some 40 feet (see plans, next page).

One of the corridor walls was the intermediate support for heavy-timber floor construction spanning the exterior walls. The architects removed the rest of the interior partitions except for the sturdy shear walls running the building's width. While the original hotel rooms would have worked well as rooms in some apartments, they would not in others. One reason for replacing all non-structural partitions was severe deterioration caused by exposure to weather since the building was abandoned in the late 1970s. Also, removal eased the installation of all-new mechanical systems. The architects did respect the building's period character in the new woodwork, and salvaged original finishes and elements when practical (see Up Close, right).

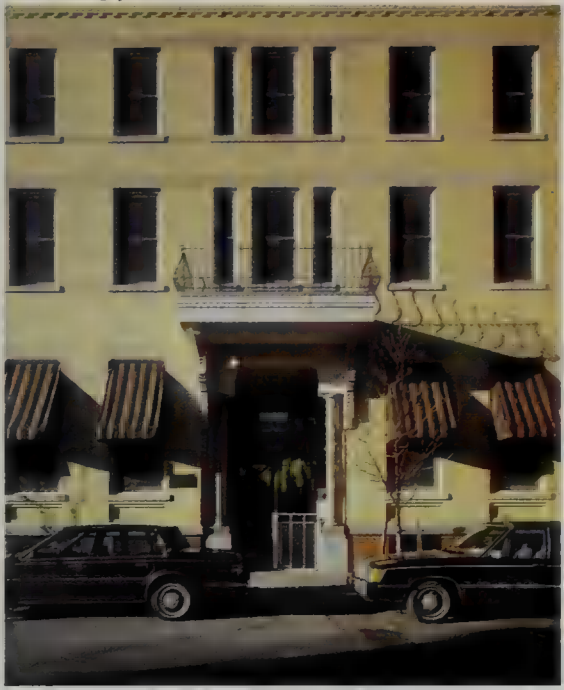
Construction cost for the project was less than that for a new building in this location—some $78 per square foot compared to some $100 for a start-from-scratch, multi-story, semi-fireproof building. "Of course, a new two-story wood-frame apartment building outside of town might have been cheaper," admits David Smotrich. But housing was only one purpose of this project.

Conversion of the Stuyvesant was the brainchild of its owners, the Rural Ulster (County) Preservation Company, a non-profit organization established for the dual goals of providing housing for the disadvantaged *and* rebuilding the local communities' economic base. Kingston's economy has suffered in recent years by the relocation of several major employers. One hope for revival lies in attracting smaller businesses, such as computer programming, that can draw income from a wide geographic base. Key to this effort is enhancing the city's charms, which are especially pronounced in the Stockade Historic District, once surrounded by the city's early defenses.

Here, the Stuyvesant is the most conspicuous building. There is also a bountiful mix of distinguished architecture spanning Colonial to Victorian times, including New York's first capitol building. According to Kathleen Maxwell, Rural Ulster's director, the Stuyvesant revival has both sparked upgrading of nearby buildings and reduced their vacancy rate—thereby fulfilling a critical goal of adaptive reuse in historic districts.

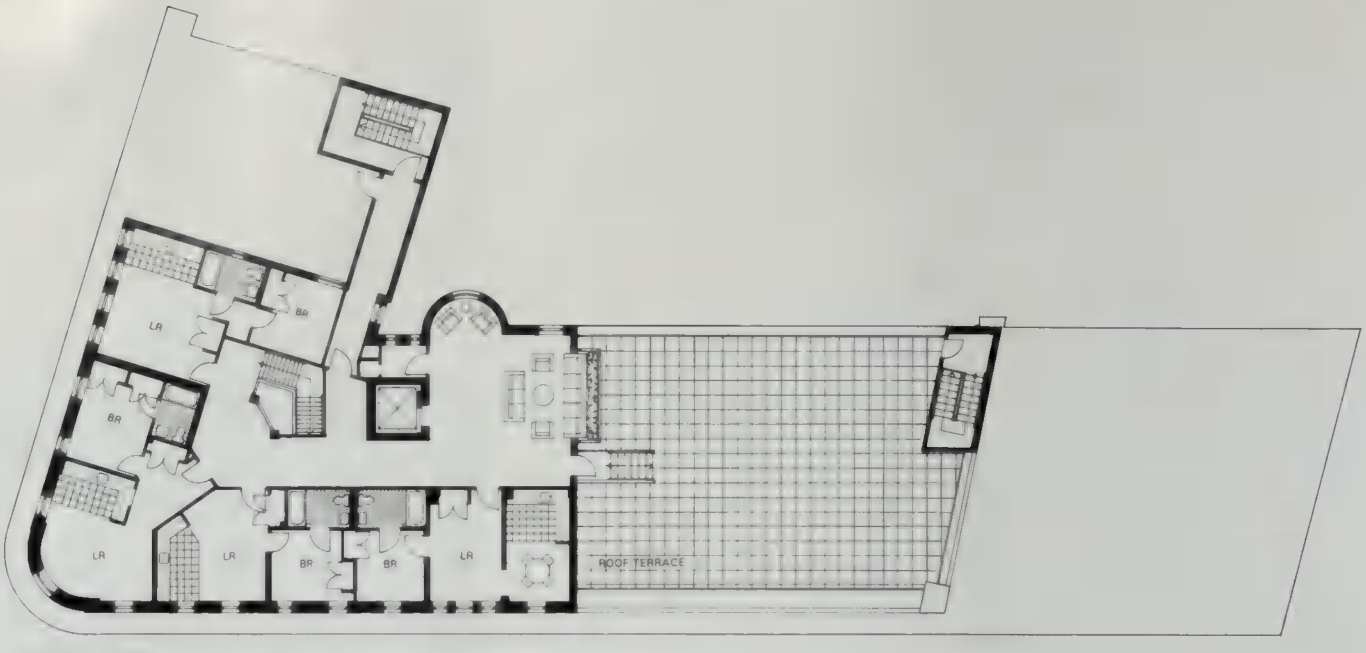
Despite the savings in rehab, Maxwell explains, such a large free-market residential project in a depressed business district would have failed without public support. Her organization assembled the $3-million construction cost from three state agencies. She fully credits David Smotrich & Partners for creating both a good place to live and "a seamless integration of old and new," fulfilling another key goal of many adaptive-reuse projects. *Charles K. Hoyt*

Lee Ewing photos

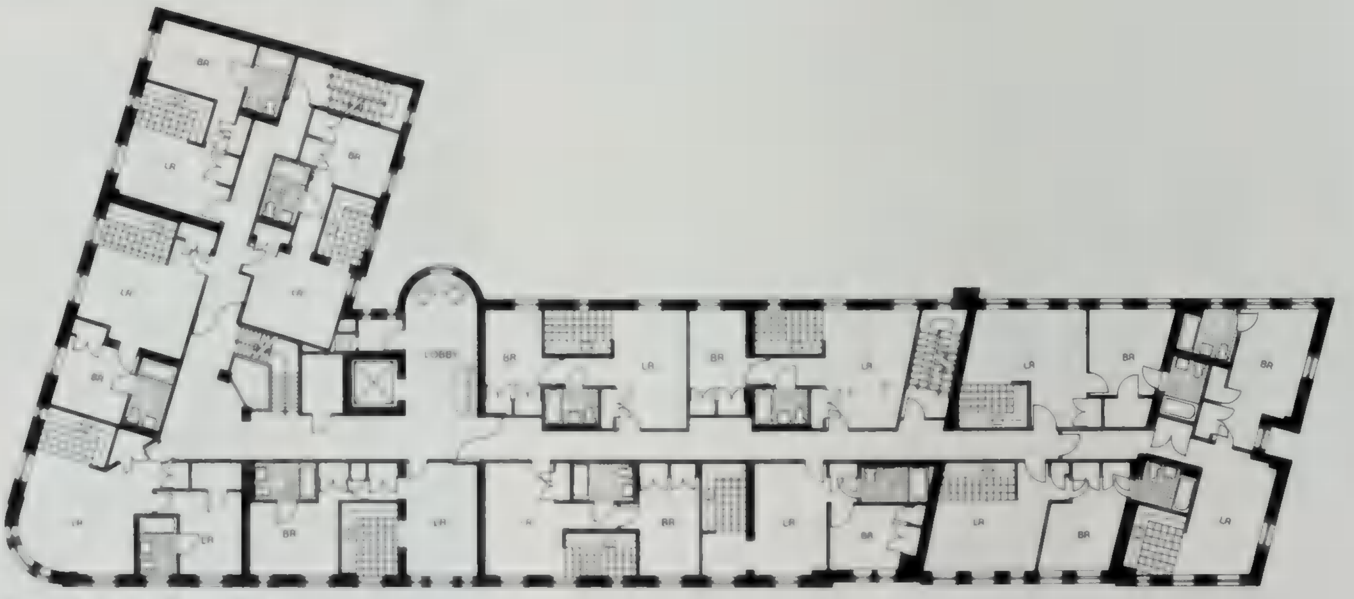


Up Close

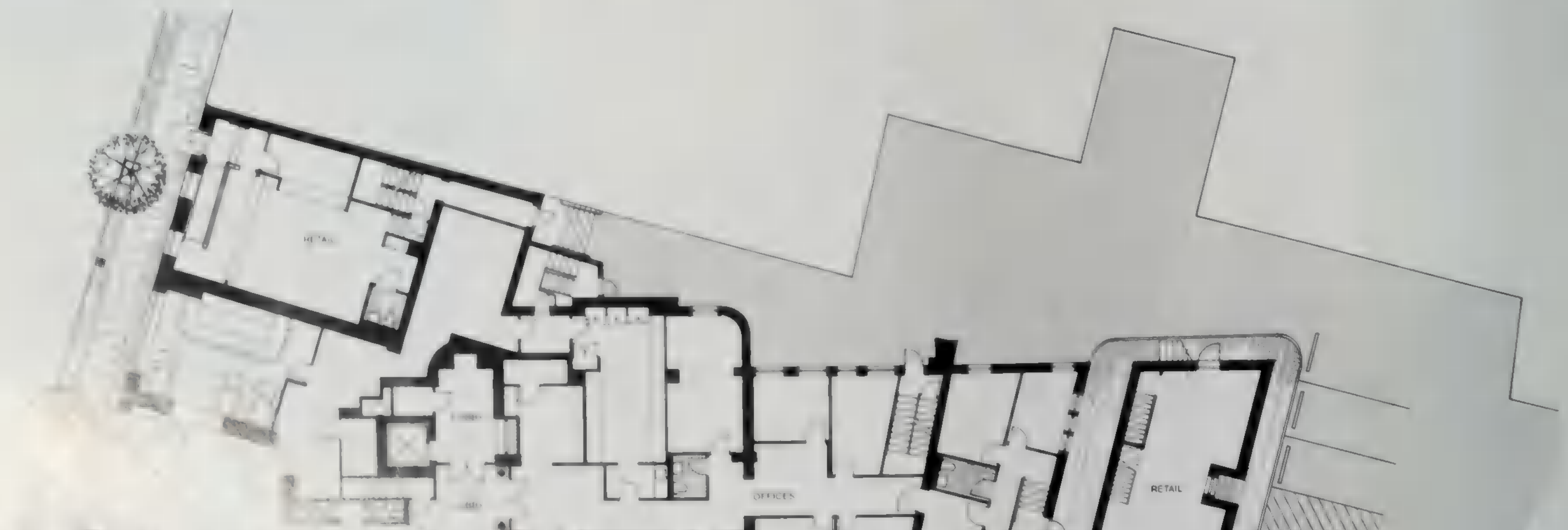
Using what's there. In an unfortunate latter-day alteration, two original small penthouses at the ends of the current top floor were joined together and the building's main cornice removed below the stark addition. Rather than sacrifice this needed space by removing it for authenticity's sake, the architects topped it with a new cornice so that the building's facade becomes an innovative version of the original. The architects found the marble columns at the corner entrance embedded in newer storefront construction. Other original columns now back in place had been discarded in the rear alley. To make the building fully ADA compliant, the architects used a mechanical lift at the residential-entrance stairs (top photo above) rather than add the usual visually intrusive (and permanent) ramp.



FIFTH FLOOR

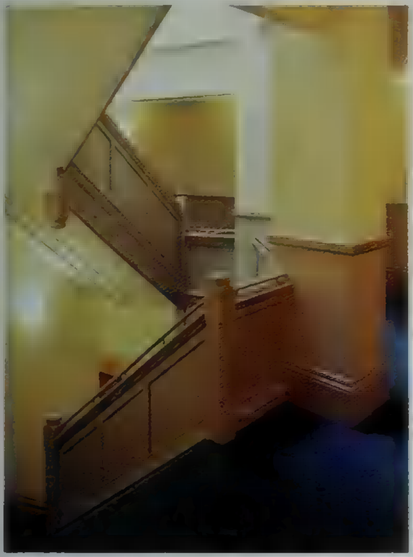


SECOND THROUGH FOURTH FLOORS



GROUND FLOOR

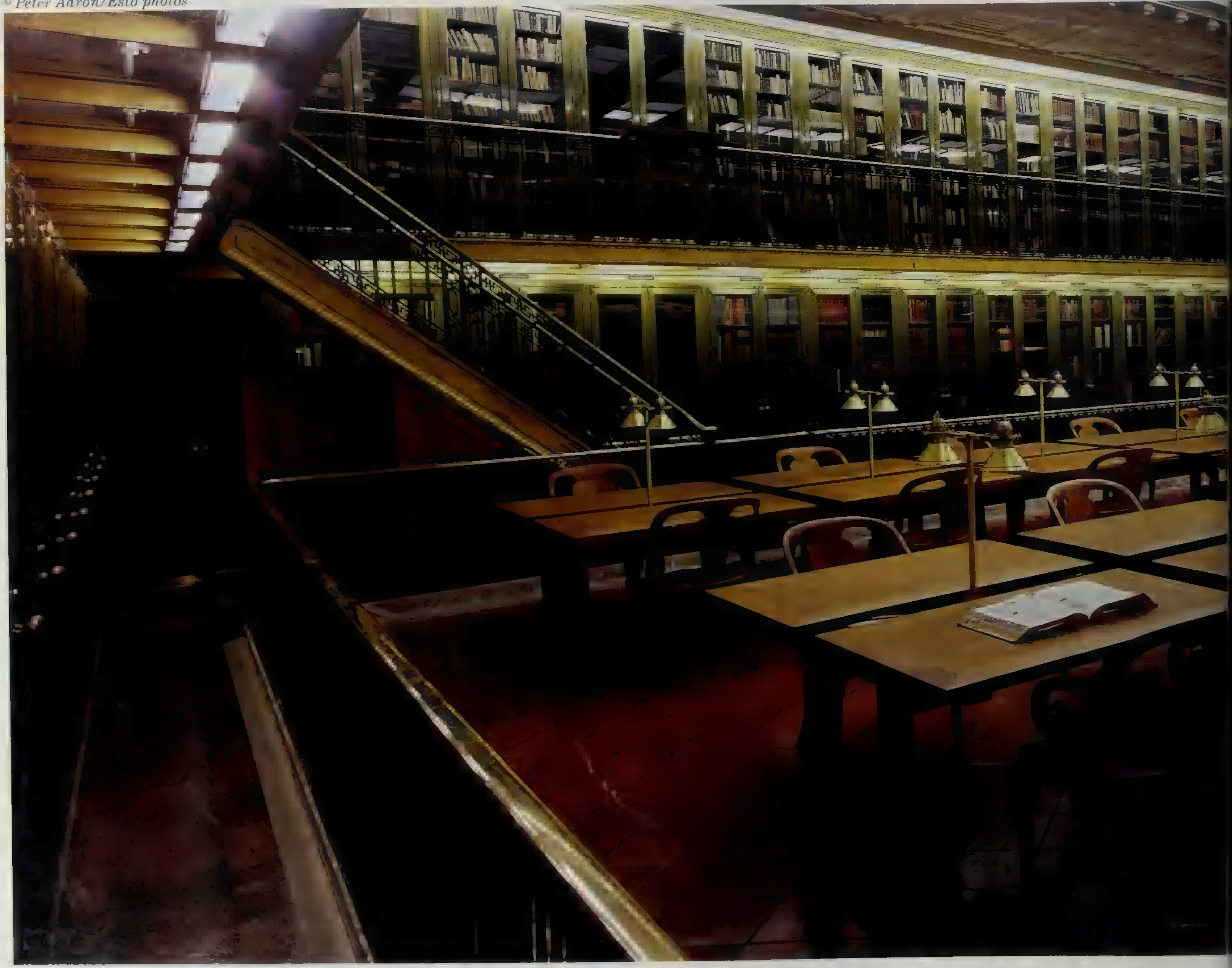
One original feature salvaged was the open stair, together with its period woodwork at the juncture of the two wings. This required a variance from the state code-review board and installation of smoke stops, automatic fire doors, and exhaust fans. The architects also restored the mosaic-tile floor in the lobby leading to the apartments and offices (photo below right). One enclosed fire stair (right-hand side ofplans) was entirely rebuilt to achieve a higher fire rating and meet current capacity requirements. The other fire stair is entirely new. Elevator lobbies on each floor serve as social gathering areas—as does a roof-top deck in good weather.



Credits
Stuyvesant Hotel Conversion
Kingston, New York
Owner: *Rural Ulster Preservation Company*
Architect: *David Smotrich & Partners, Architect—David Smotrich, partner-in-charge; William Eisenberg, managing partner; Francesca Russo, project architect*
Engineers: *S. Berkowitz & Associates (mechanical); Dunne & Marks (structural)*
Construction Manager: *Ted Musialkiewicz*

Ex Libris

© Peter Aaron/Esto photos



The best way to preserve rare books and manuscripts is to keep them in the dark, in conditioned air and not to allow anyone to touch them. [illegible]ly, this is not conducive to scholarship. Neither were ex[illegible] the main branch of the New York Public Library, [illegible] collections were scattered throughout the [illegible] circulation of books and loss due to theft [illegible]

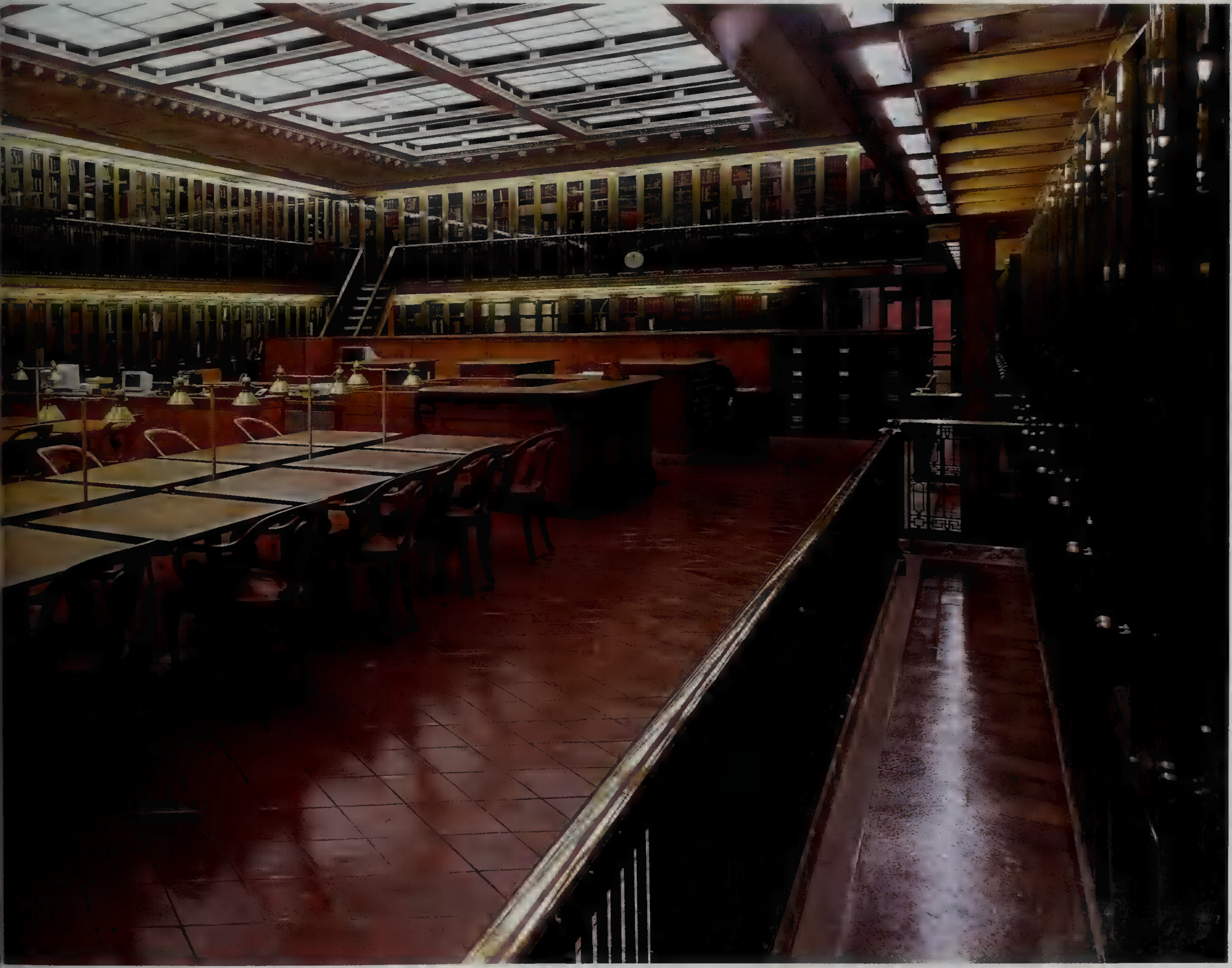
"The problem was to try and create a secure study area that didn't disturb the environment of the library, that could provide the conditions required for the storage of rare books and manuscripts," says Fred Chomowicz, senior associate for Davis, Brody & Associates. The former History and Genealogy Room was chosen as the location.

An independent hvac system was installed to condition air to precise temperature and relative humidity levels. The air is introduced through vents in the newly restored laylight, which does not admit daylight but is backlit by fluorescent lamps. UV light produced by the fluorescents is filtered by film within the laylight's laminated glass panels.

Hardly noticeable in the room are the new archival bookcases, designed to fit snugly into the existing mezzanine structure. The prefabricated steels cases "are completely sealed and finished with a powder coating, so there is no out-gassing. We used a tinted, UV-filtering glass for the doors. Some folks wanted doors with no glass in them—that would have been a disaster for the appearance of the

A subtly designed rare-books room respects Carrère and Hastings' classic New York Public Library.

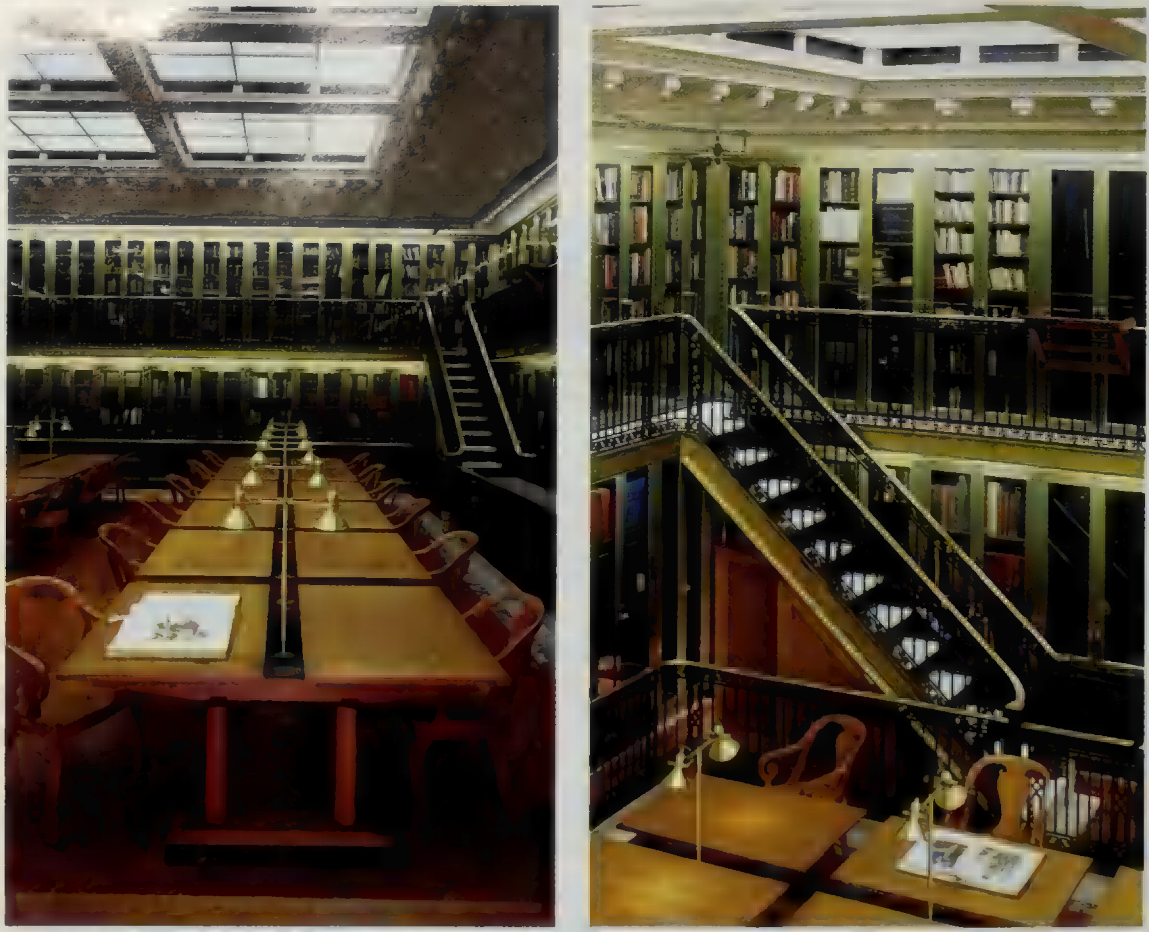
The Brooke Russell Astor
Rare Books and Manuscripts Reading Room
New York Public Library
Davis, Brody & Associates, Architects



library," continues Chomowicz. Library patrons are not allowed direct access to the cases, which are kept locked, and the room's security system informs librarians when a bookcase door has been left open. The cases are illuminated by fluorescent strips that use an elliptical reflector designed to provide an even wash of light on the doors.

Davis, Brody also designed new furniture for the room, including the illuminated oak study tables, which also have built-in outlets for laptop computers. "The librarians insisted on individual tables rather than the usual long ones. That way the research material is confined to a smaller area and is much easier to supervise," says Chomowicz. Other woodwork, such as the main counter and the original Carrère and Hastings chairs, was rehabilitated. *Charles Linn*

The Brooke Russell Astor Rare Books and Manuscripts Reading Room was formerly the History and Genealogy Room; archival-storage bookcases, hvac, lighting, and most casework is new. The restored laylight carries air-supply grilles for the hvac and is backlit by fluorescent lamps.

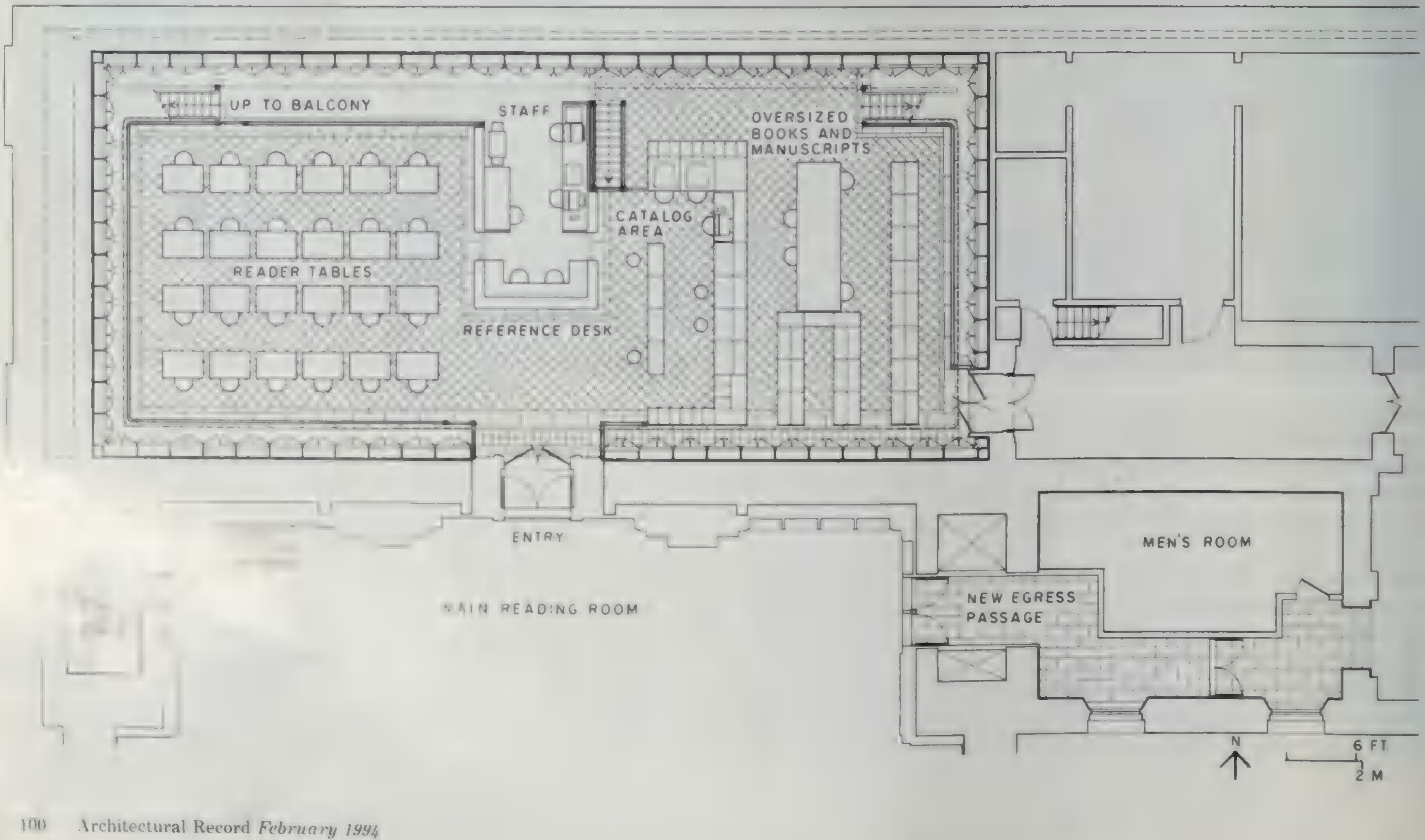


New library tables (far left) have built-in electrical outlets and individual table lamps. Smaller tables allow librarians to more easily supervise patrons using the rare books. Original Carrère and Hastings-designed chairs were rehabilitated and refinished. New steel bookcases, designed to protect rare books and manuscripts fit into the original mezzanine's structural system. Some of the cases carry return-air grilles. A new path of egress (plan below) was cut through a restroom so that in the event of an emergency, patrons in the main reading room would not have to exit through the rare-books room.

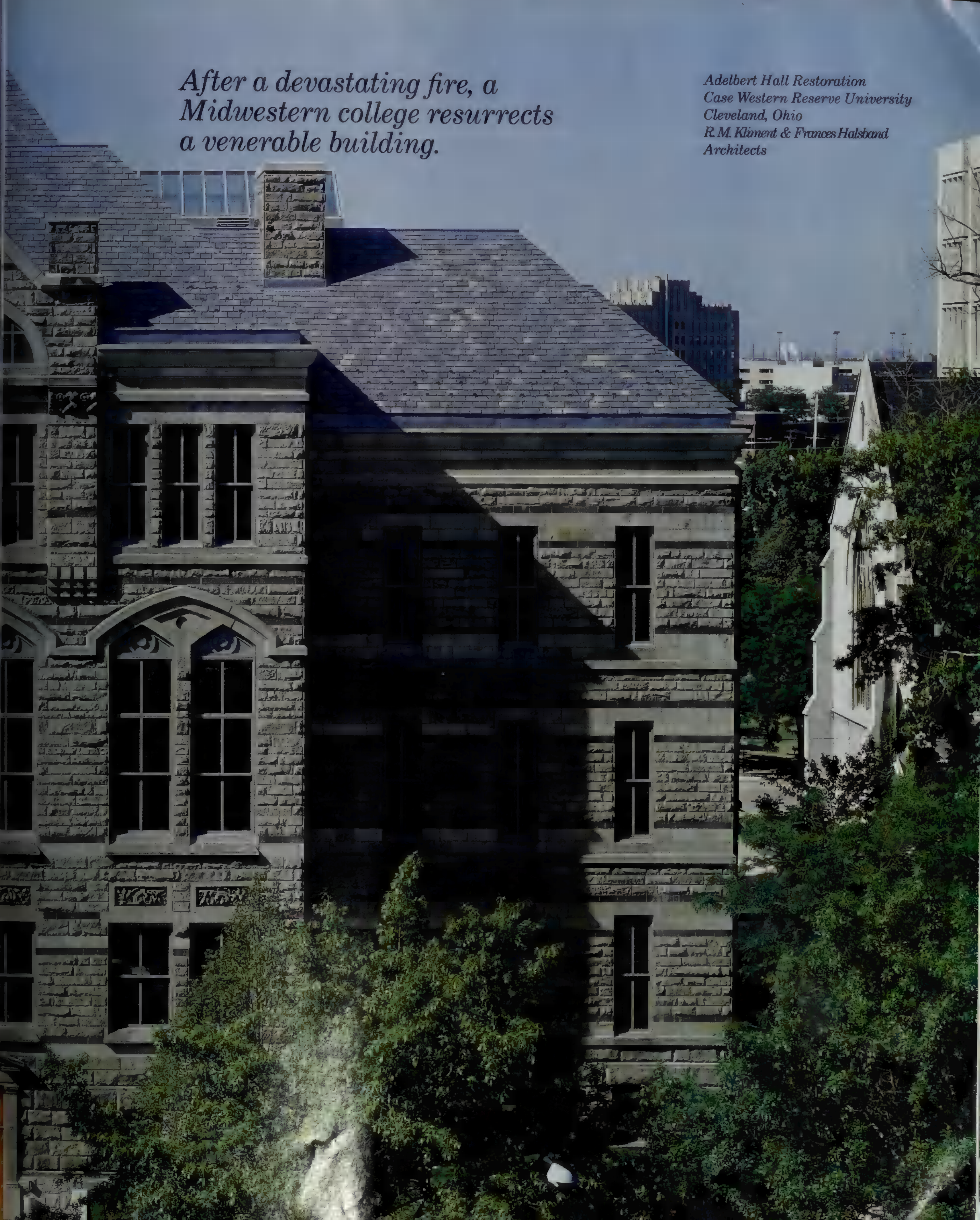
Credits
The Brooke Russell Astor Rare Books and Manuscripts Reading Room
New York Public Library

Architect: *Davis Brody & Associates, Architect—Lewis Davis, partner-in-charge; Nat Hoyt, associate partner; Fred Chomowicz, senior associate; Kshtij Rana, project architect*

Consultants: *John Altieri Associates (mechanical/electrical); James Leon (structural); Fisher Marantz Renfro Stone (lighting)*
General Contractor: *York-Hunter*



Up From the Ashes



After a devastating fire, a Midwestern college resurrects a venerable building.

Adelbert Hall Restoration
Case Western Reserve University
Cleveland, Ohio
R.M. Kliment & Frances Halsband
Architects

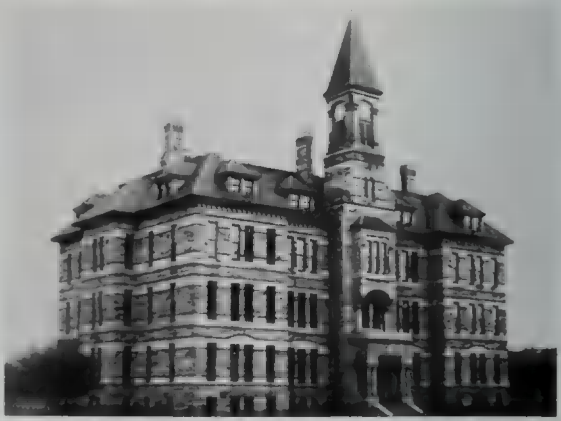
The oldest building on campus and seat of the school's administration, Adelbert Hall lies at the heart of Case Western Reserve's identity. So when a fire swept through the building in June 1991—pulling down the old slate roof, toppling the belltower, and gutting the interior—the university was in danger of losing a precious link with its past and a vital piece of its working capital. But thanks to an "interpretive reconstruction" designed by R. M. Kliment & Frances Halsband Architects, the landmark structure has been given a second life and outfitted to take the university into the next century.

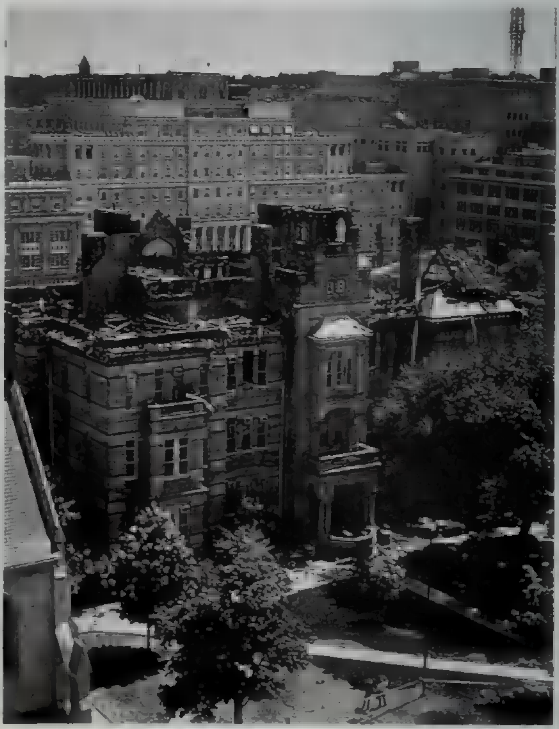
In its new incarnation Adelbert Hall is not the building it once was. But change has been a constant in the building's history. Designed by Joseph Ireland and completed in 1882, Adelbert Hall was originally a classroom building. Subsequent alterations added a chapel, a bookstore, and administrative space to the building. In the process, the building's Romanesque Revival architecture was compromised by Italianate roof brackets, a reconfigured central tower, and ad-hoc changes in interior spaces. "We were asked to design the reconstruction of Adelbert as an administration building," says partner-in-charge Robert Kliment, "adding generic office space, meeting rooms, and support spaces and preserving the ceremonial qualities and communal spirit of the original." In so doing, the architects designed new construction to be consistent with the original Romanesque Revival vocabulary.

After the fire, all that remained were the sandstone exterior walls and the steel-joist and brick-vault-floor structure. Whatever interior masonry walls remained were below code, so they were removed and a new steel frame was inserted. Because the most pressing task after the fire was to seal the building from the elements, a new fourth floor was poured first and construction progressed from the top down. While the pre-fire building had an attic with a roof sitting somewhat awkwardly atop bracketed eaves, the reconfigured structure now has a full fourth floor with a slate roof resting firmly on a new stone cornice. To reinforce the building's prominence on campus, the architects increased the mass and ornament of the tower, using stone from the original quarry. The new aluminum double-glazed windows have the same profiles and divisions as the originals. On the east side of the building, facing Adelbert Road, the grade was lowered to accommodate a new handicap-accessible entrance.

Inside, the major goal was to preserve the spirit of the central stairhall as a grand space for casual encounters, while adding state-of-the-art flexible offices all around it. However, the new entrance on the east side of the building and the addition of new mezzanine levels within the 16-foot floor-to-floor heights required some reconfiguring of the stairs. The most dramatic change in the stairhall is the new skylight, larger than the old one with clear rather than opaque glazing. To underscore the transformation from a dark oak-paneled hall to a light-filled vertical-circulation core, the architects painted [illegible] walls in a gentle gradation of hues—from pumpkin on the first [illegible] white on the top floor. The new mechanical system [illegible] handling units in the attic and a cooling tower and [illegible] building.

"We [illegible] the character of the old building," [illegible] Western Reserve's vice president [illegible] planning [illegible] could find ways to improve it, [illegible] was met," says the owner. [illegible]

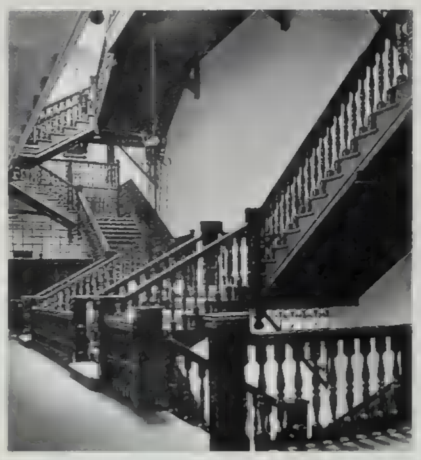




Case Western Reserve University photos except as noted

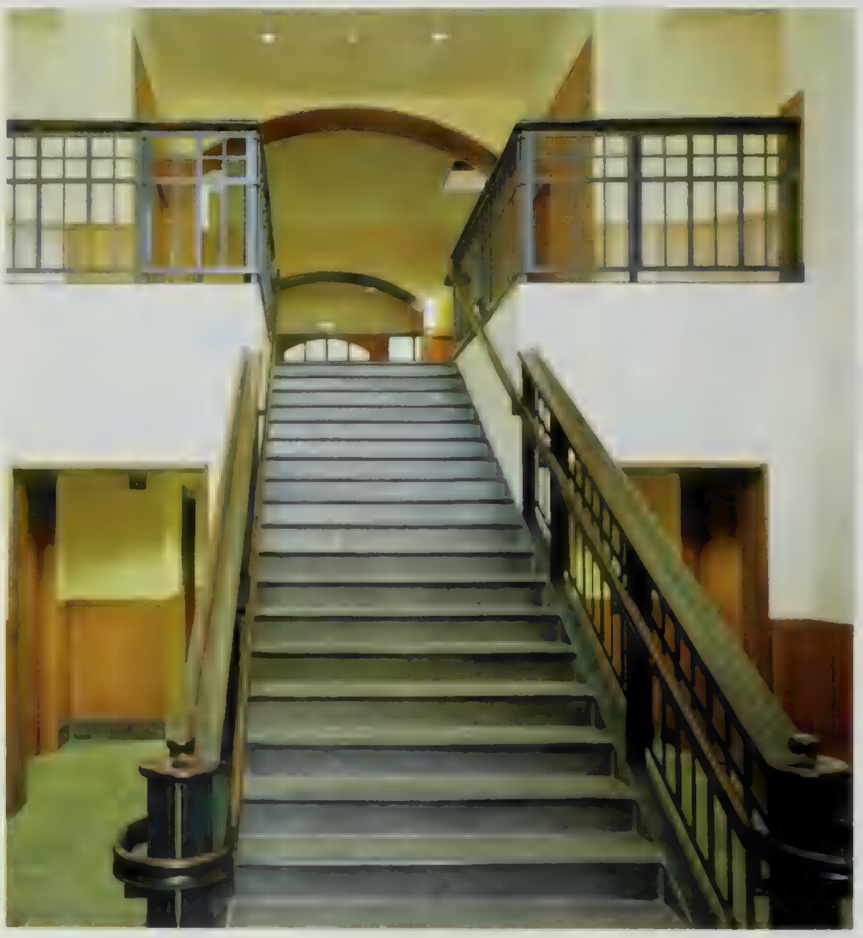
Up Close

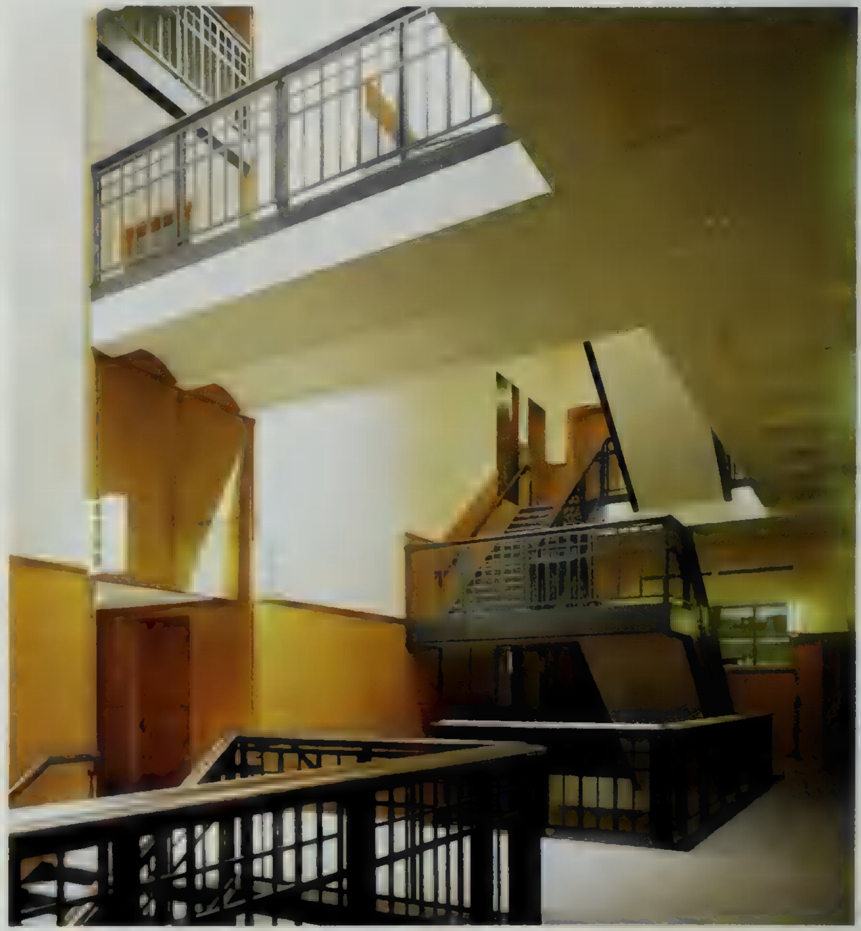
Building from the top down. The original Adelbert Hall (seen shortly after completion in 1882 in top photo) was ravaged by fire in 1991 (above). To protect the damaged building from the elements, the architects' first sealed it with a new fourth floor, leaving openings in strategic locations through which building materials could be lowered. This top floor was initially placed on existing bearing walls, which had been temporarily shored up. Once the new steel columns reached the top floor, the old bearing walls (which didn't meet code) were removed down to the third floor. The existing third-floor beams were then shored, while new girders were run between columns. With these members in place, the old third-floor walls could be removed. This procedure was followed until all of the old bearing walls were eliminated and a new steel-frame had been erected within an enclosed building. On the campus-facing (western) side of the building (opposite), a new stone cornice replaces the bracketed eaves dating from 1902.

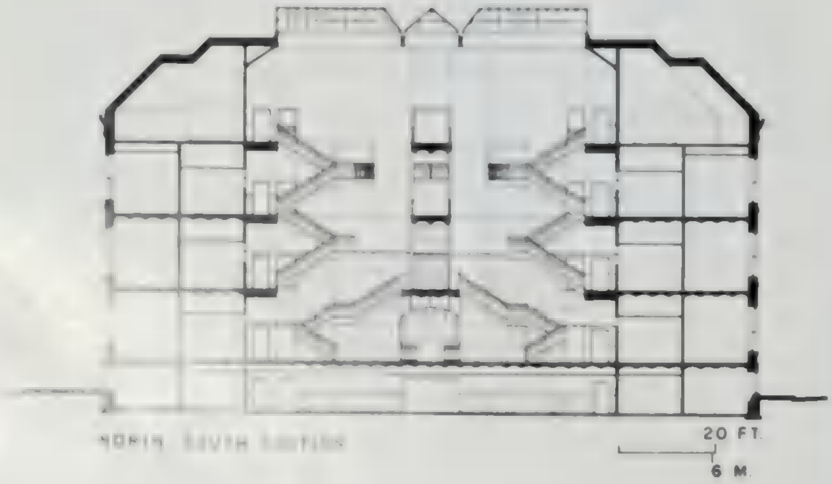


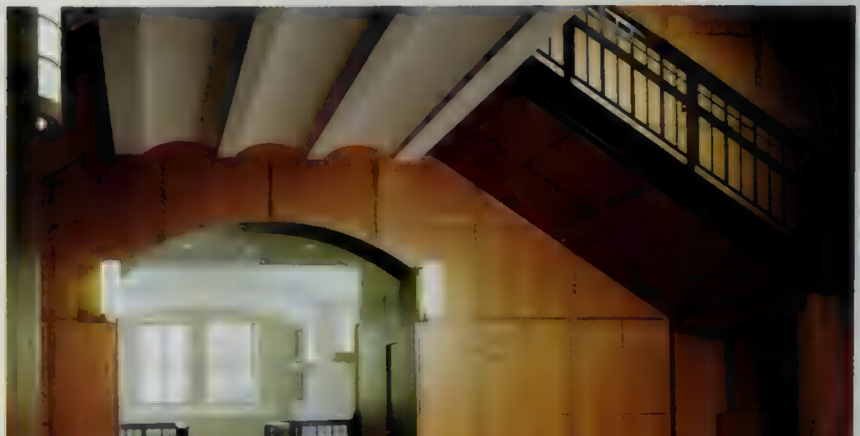
Although reconfigured to accommodate a new entrance on the east side of the building as well as new mezzanines, the central stairhall (photos this page and section) retains the footprint of its pre-fire predecessor (left). It also serves the same function as an important social gathering area. The stair has a different character, though, due to an enlarged skylight with clear rather than opaque glazing (top left, opposite).

The dark Victorian feeling of the old stairhall's furnishings has been relieved by combining red-oak-veneer paneling with paint colors that grow lighter as the floors get higher. The architects organized office spaces around the stairhall and added new restrooms and kitchenettes. They also renovated areas to the east and west of the stair to serve as major ceremonial spaces, such as a conference room (right



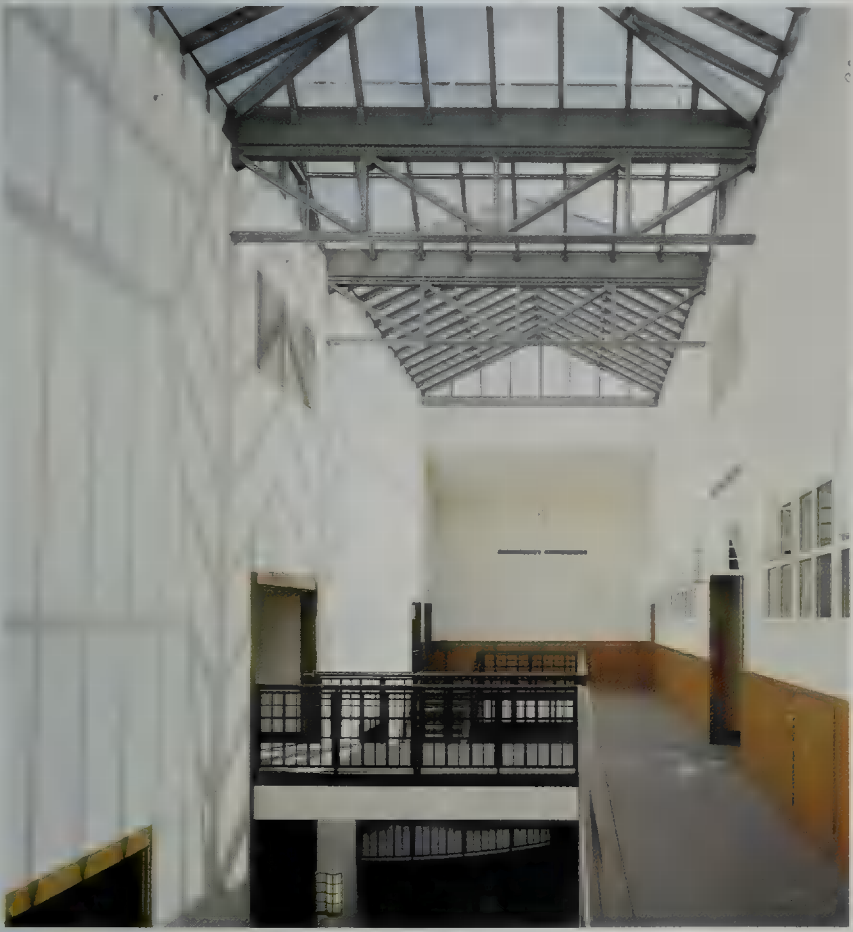


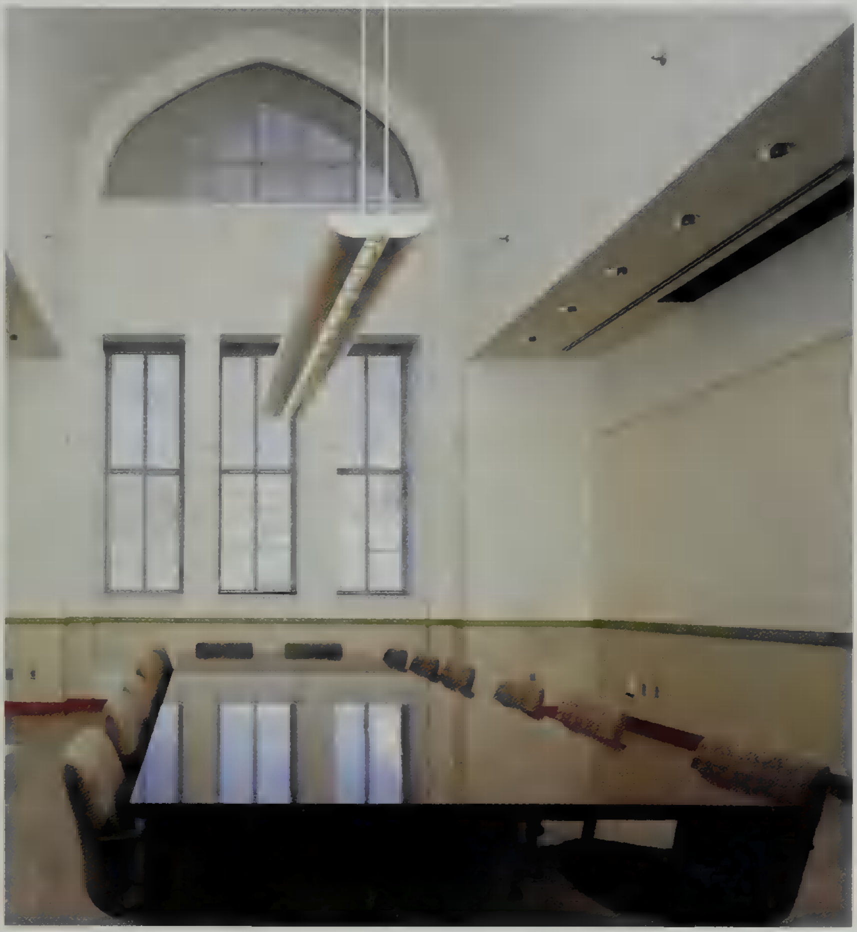


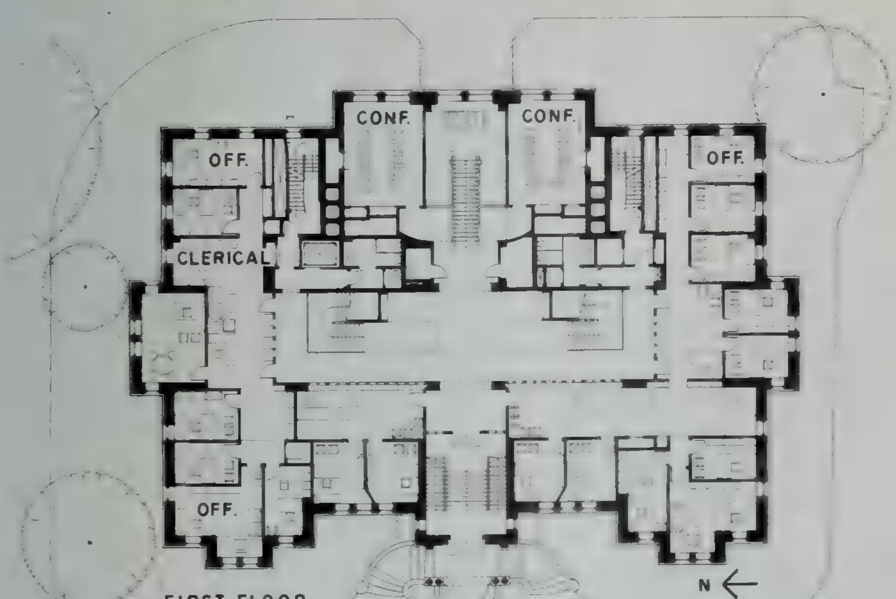


below) fitted into the tower. Pendant lighting with fluorescent up-lights and incandescent down-lights was designed by the architects.

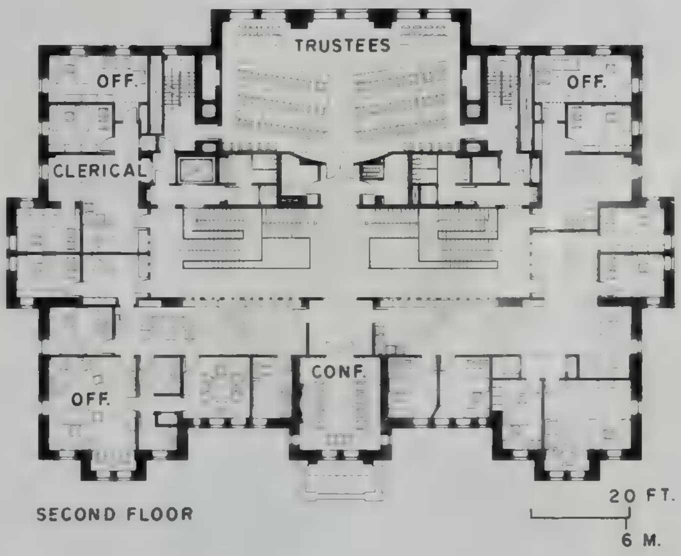
Credits
Adelbert Hall
Cleveland, Ohio
Owner: *Case Western Reserve University*
Architect: *R. M. Kliment & Frances Halsband Architects—R. M. Kliment, partner-in-charge; Frances Halsband, collaborating partner; Richard L. McElhiney, associate-in-charge; Christopher R. Borchardt, George D. Hallowell, Michael A. Nieminen, Joseph Singer, Mark H. Wright, design team*
Engineers: *Barber & Hoffman (structural); Byers Engineering (mechanical/electrical)*
Consultants: *Robert Schwartz & Associates (specifications); H. M. Brandston & Partners (lighting); Robert A. Hansen Associates (acoustics)*
Construction Manager: *The Krill Company*







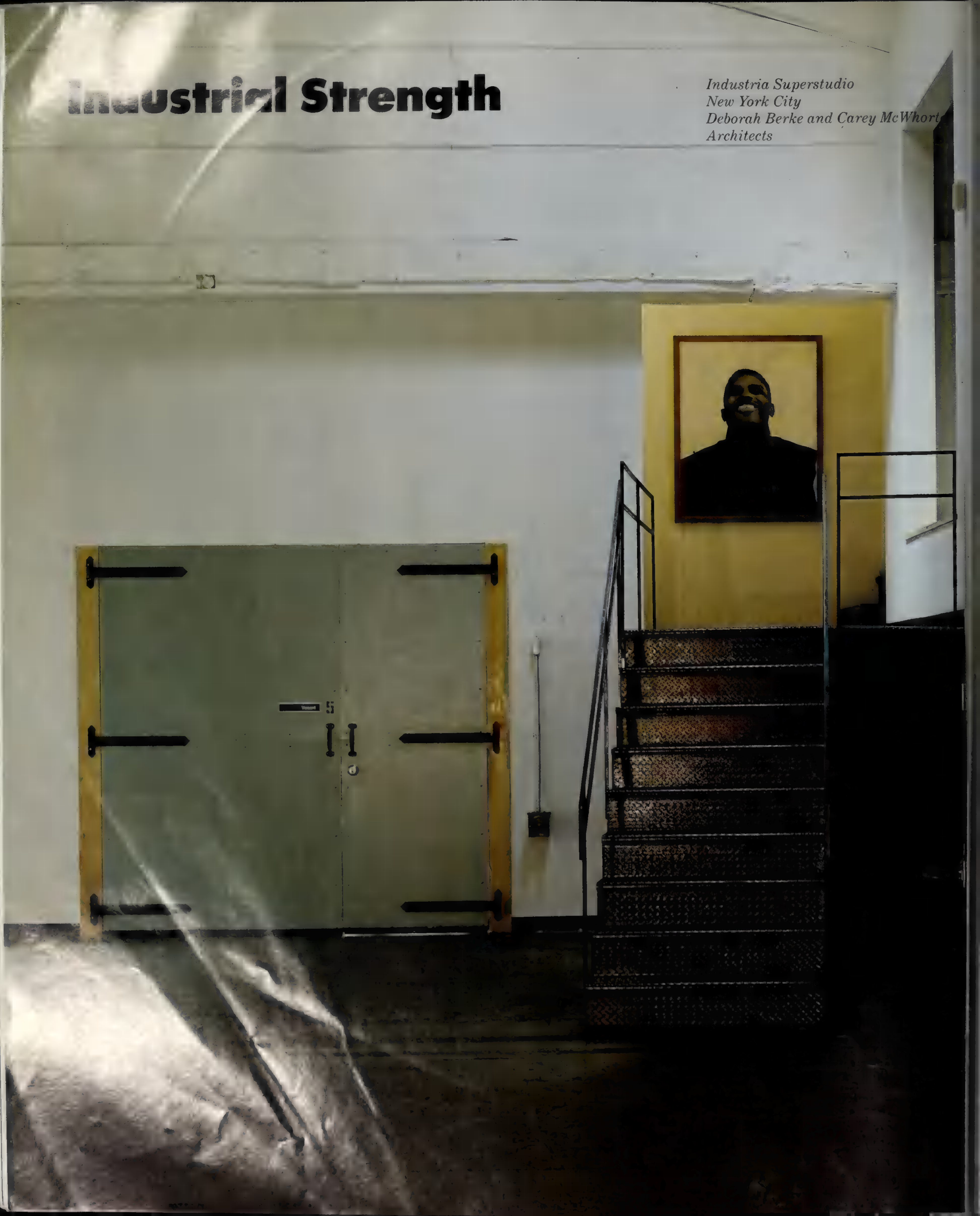
FIRST FLOOR



SECOND FLOOR

Industrial Strength

Industria Superstudio
New York City
Deborah Berke and Carey McWhort
Architects

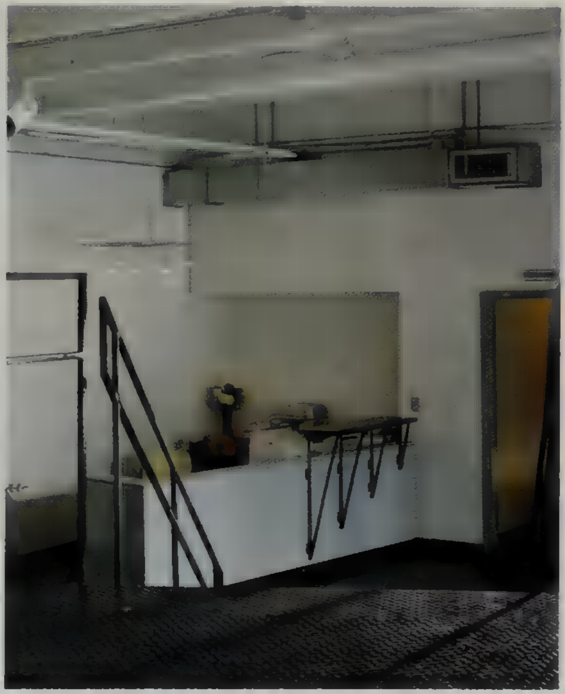


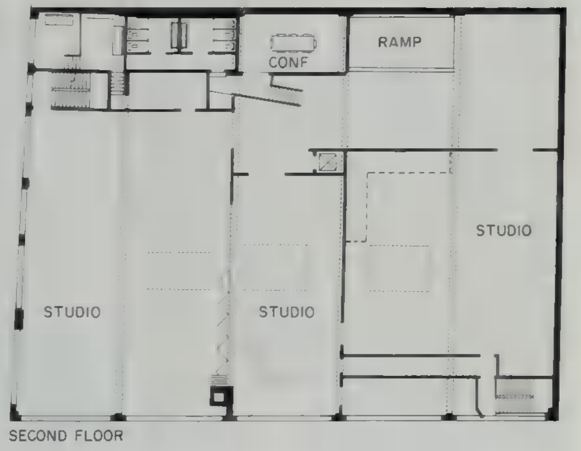
To outsiders, the world of high-fashion photography is nothing if not glamorous. Photographer and entrepreneur Fabrizio Ferri sees it otherwise. "It's work," says Ferri. To transform a 1930s building located on the fringe of New York City's meatpacking district into high-priced all-equipped rental space for fashion shoots and related social events, Ferri turned to architects Deborah Berke and Carey McWhorter. In addition to the duo's interest in industrial vernacular, Berke, a former model, displayed what Ferri considered a fitting indifference to the fashion world's glossy veneer. "She knows the reality of the business," he explains. "It's about utility," offers Berke.

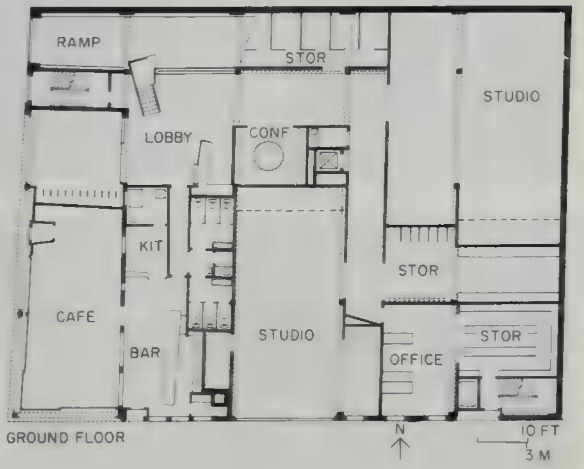
The former auto garage's reputation as a specialist in Rolls Royce repairs had an allure not lost on Ferri, a Rolls Royce owner. In addition to its cosmopolitan past, the structure boasts the wide open spaces and high ceilings ideal for customizing photo shoots. Ferri was also attracted by the building's westerly orientation—"the best light for shooting"—and its proximity to the Hudson River—"it gives the energy of commerce." After repairing exterior brickwork and existing steel-sash windows in accordance with the New York City Landmarks Preservation Commission's regulations, Berke and McWhorter reconfigured the 20,000-square-foot interior space into different-size studios, each with its own spatial and lighting amenities. On the ground floor, the architects made smaller studios, inserting walls among a 24-foot grid of columns. On the second floor, two giant studios share the uninterrupted open space of 90-foot wood bow trusses and skylights (which can be covered depending on each photographer's requirements). An existing internal automobile ramp also makes the second floor accessible to large props and heavy equipment—in fact, an elephant was recently led upstairs to have his picture taken.

Separating the studios are asymmetrical mossy-green painted double doors with three-foot- and five-foot-wide panels that can be opened to admit people and props. In between studios, the architects carved out spaces for dressing rooms and makeup tables, adapting used scaffolding as furniture. Berke and McWhorter replaced gas furnaces suspended from ceilings with a conventional forced-air heating system, leaving ducts exposed. The building had 400 amps of power, but to accommodate the enormous power draw of strobe lighting, the facility was completely rewired for 800 amps. "The building was intended for heavy-duty use," explains McWhorter, "And that still applies." "Industrial and clean," says Berke of the overall effect, noting that frequent post-shoot paint jobs keep Industria looking new. The work is often charged to clients as a clean-up service, part of a business strategy that has proven successful enough to allow Ferri to expand his operation down the street. *Karen D. Stein*

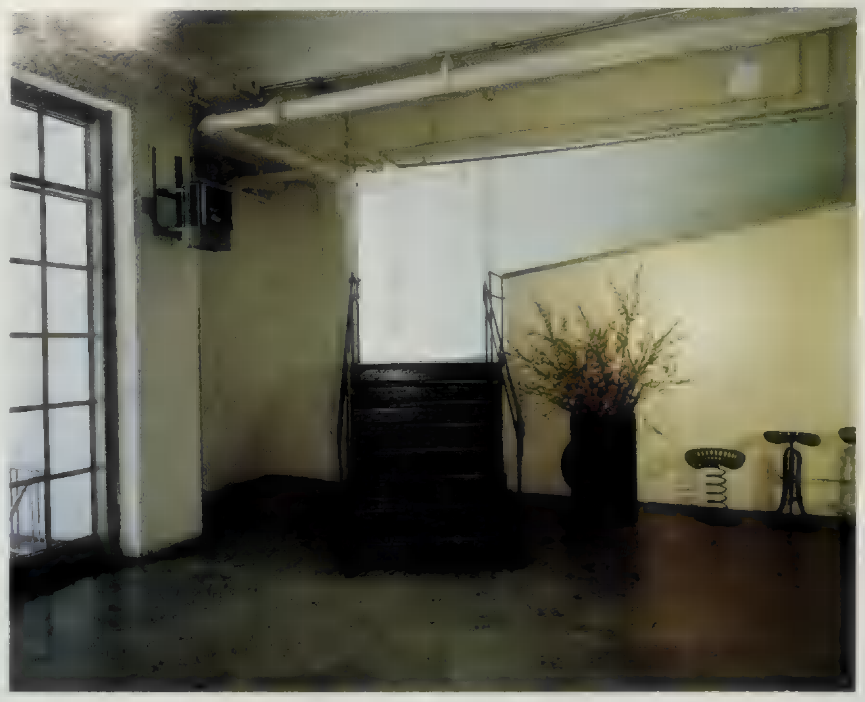
© Catherine Bogert photos

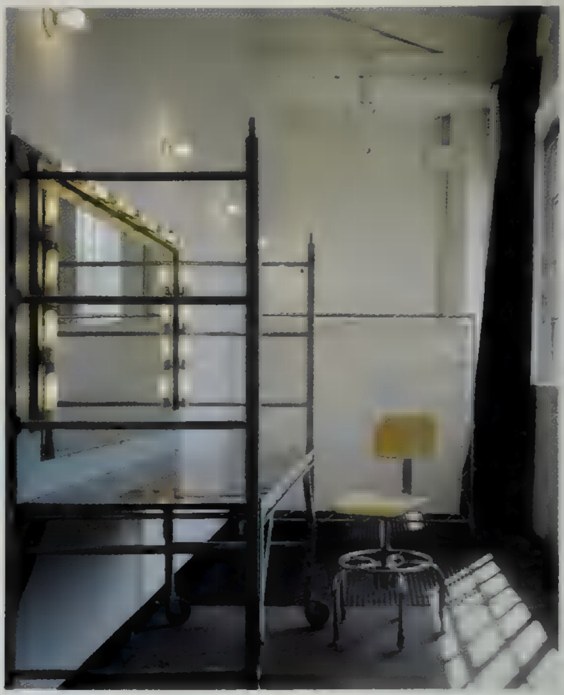


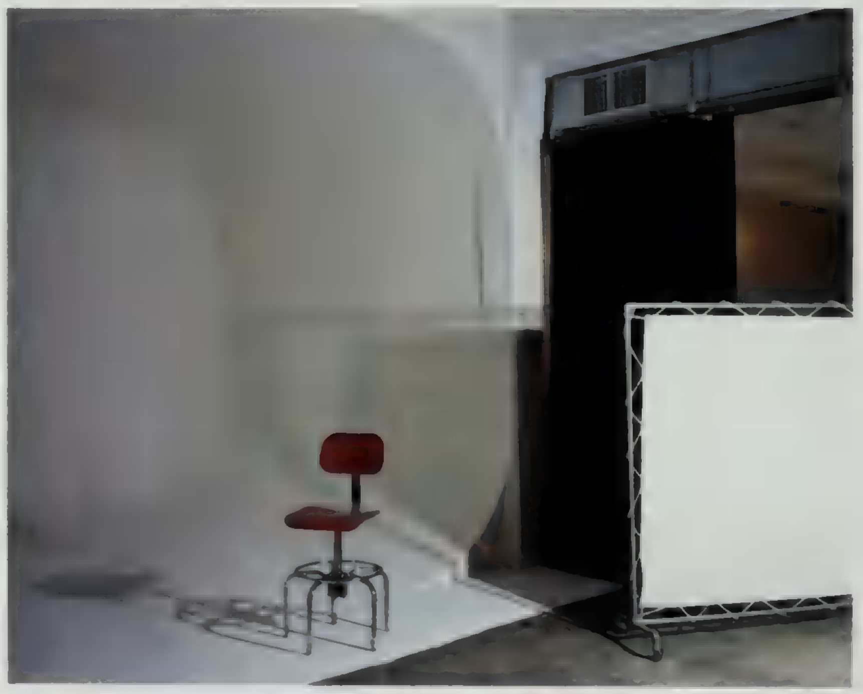




Industria Superstudio occupies a former auto-repair garage on Manhattan's Lower West Side. For $38 per square foot, the architects had exterior brick repointed and divided the 20,000-square-foot interior into different-size studios that rent for between $550 to $1,200 per day (plans above). An Industria-owned restaurant in the southwest corner of the building caters to the facility and can be rented for private parties (photo left). A reception desk overlooks a new glass and steel storefront (top).







The architects recycled used scaffolding into furniture, including make-up desks and prop tables topped with stainless-steel commercial kitchen counters (top) and privacy screens (opposite). Curved cement and plaster "cycloramas" (middle and bottom left) create seamless backdrops. Second floor studios have west and southerly exposures and repaired skylights, but can be blacked out if necessary. The architects called for a new concrete slab on the ground floor and had the concrete second floor painted.

Credits
Industria Superstudio
New York City
Owner: *Industria Superstudio Overseas, Inc.*
Architect: *Deborah Berke and Carey McWhorter Architects—Deborah Berke and Carey McWhorter, principals-in-charge*
Engineers: *Ross Dalland (structural); IP Group—Ivan Pollak, principal (electrical)*
General Contractor: *GP Winter*

The Primary Care Clinic marks a successful, adaptive reuse that never would have happened without creative vision. It is in one of two long unoccupied buildings located diagonally across the street from each other; both were in advanced stages of deterioration. They are located in a marginal neighborhood plagued by theft and vandalism, the sort of evils that fester when buildings close and normal sidewalk traffic disappears. Yet, it was the idea of remodeling not one but both buildings and its impact on this location, which is less than half a mile from the main Children's Hospital campus, that attracted the client to the project.

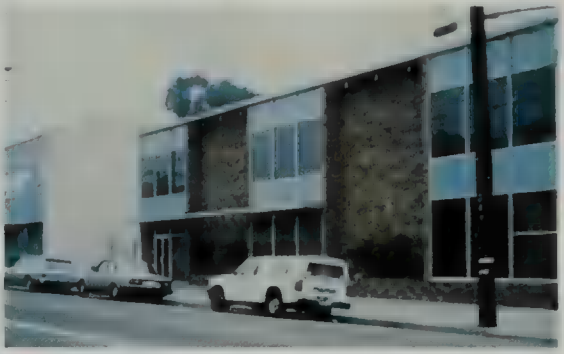
The Primary Care Clinic's interior was a warren of offices with a clearly dated facade (top photo, right), an unpromising host to a program that called for clear visual order and a bright, inviting atmosphere. A first floor raised above grade made creating access for the disabled problematic. The load-bearing-masonry walls surrounding steel column-and-beam construction all required connectors and stiffening to meet current California seismic requirements. The wood floors and roof would not meet fire-safety requirements for the anticipated large numbers of people and heavy traffic. Nor would existing passages and fire exits. To install a needed hydraulic elevator, a 30-foot-deep pit would have to be dug below the water level of a nearby underground creek. Mechanical and electrical supply was woefully inadequate for a clinic.

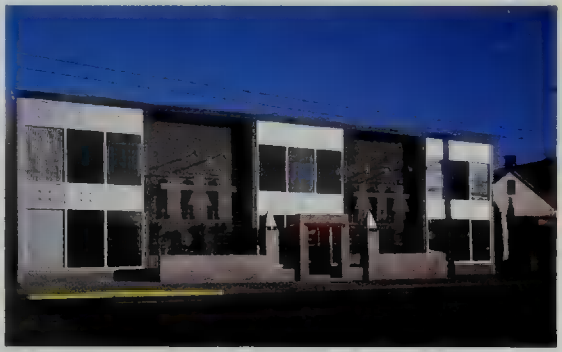
Given these challenges, it may seem surprising that the architects would go to such lengths to remodel instead of starting anew. But the basic components did offer several pluses. The structure and exterior walls could be repaired economically. The floor heights were right, and the square footage met requirements.

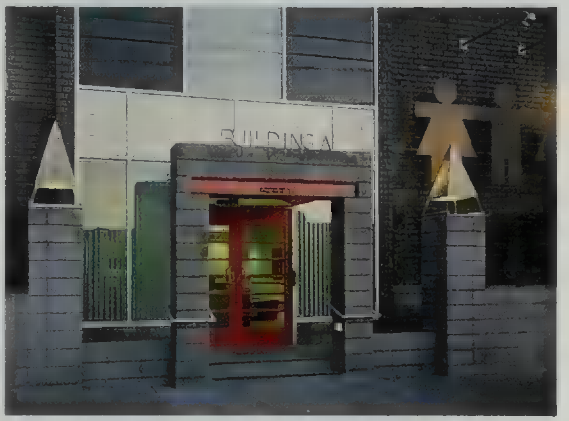
Except for the steel structure, the building was gutted to its exterior walls. New concrete slabs were poured on the first and second floors, and a hole was cut in the roof to allow for a skylight over the open, central stairs, which wrap around the new elevator shaft. The skylight saves energy by cutting down on the need for electric-light sources. More importantly, it contributes a bright atmosphere to the interior, calls out the vertical circulation and provides a clear sense of orientation on each floor. (The architects point out that easily understood circulation is important to any building with many first-time visitors, whereas office floor plans, as in the original building, are set up for people who know their way around.) Four medical units on the first floor surround a central waiting area (plans, next page). Each contains a nurses' station and five exam rooms. Each unit has its own color of wood casework (see Up Close). Non-English-speaking visitors use color cards to find the corresponding unit. The second floor contains smaller rooms for psychiatric care as well as doctors' offices. On the outside, the architects have used stainless-steel mesh as protection for windows while enlivening it with paper-doll-like cut-outs. These and other playful elements are designed to entice reluctant young patients through the doors. A wheelchair ramp is concealed behind a sidewalk planter.

Was the effort worth it? For $119 per square foot, including special casework, Ratcliff produced a 17,000-square foot building that is both an efficient workplace for the medical staff, and a pleasant place for children. And the architects reinforced the turnaround of a neighborhood that was once on its way downhill. *Charles K. Hoyt*

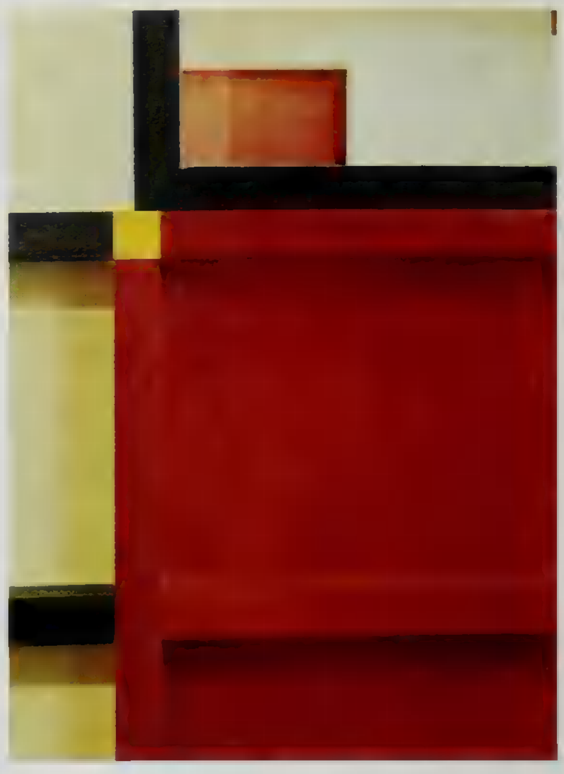
© Andrew McKinney photos







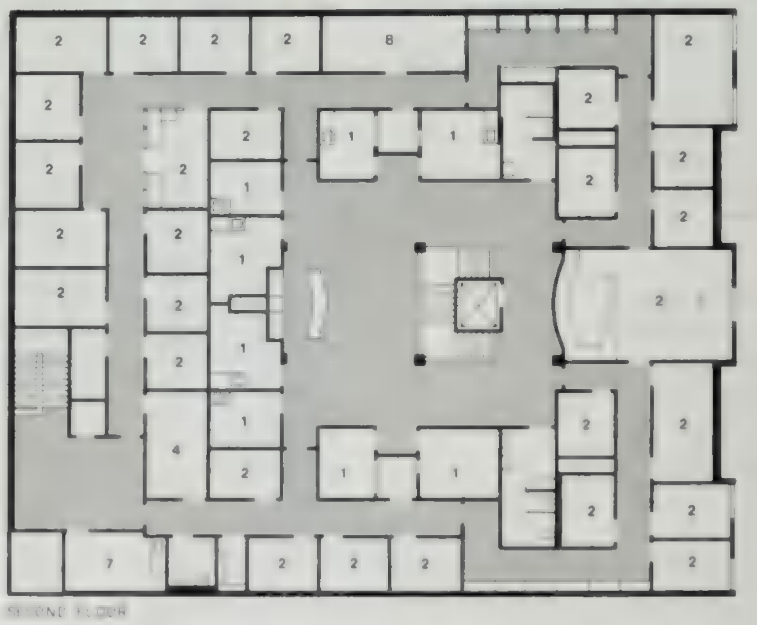
In converting this building to a children's clinic, the architects have made a remarkable change to the facade of a dated former office building, while allowing its original form to show through. The purpose was twofold: to put potentially reluctant young patients at ease and help revive a deteriorated neighborhood.



Up Close

Original solutions. To meet the need for durable and economic furniture and partitions, the architects used natural wood with an aniline-dye finish that allows the natural grain to show through. Colors were chosen to brighten the spaces and emphasize a building-block character designed to appeal to young patients. To further this appeal, the architects reduced the furniture's scale to childlike proportions. Casework was executed by Rod Hoffmann. A play area (opposite below) is located i immediately inside the front door and is supervised by parents who sit around it, and by workers in offices that ring this central space. The low budget also covered such custom elements as the paper-doll-like cutouts on the facade, executed by crafsman Ken Draizen of Interactive Construction. Glass in many partitions is designed to ehance transparency and make a friendly open impression.

1. *Examination*
2. *Office*
3. *Charting*
4. *Conference*
5. *Discharge*
6. *Interview*
7. *Staff lounge*
8. *Screening*



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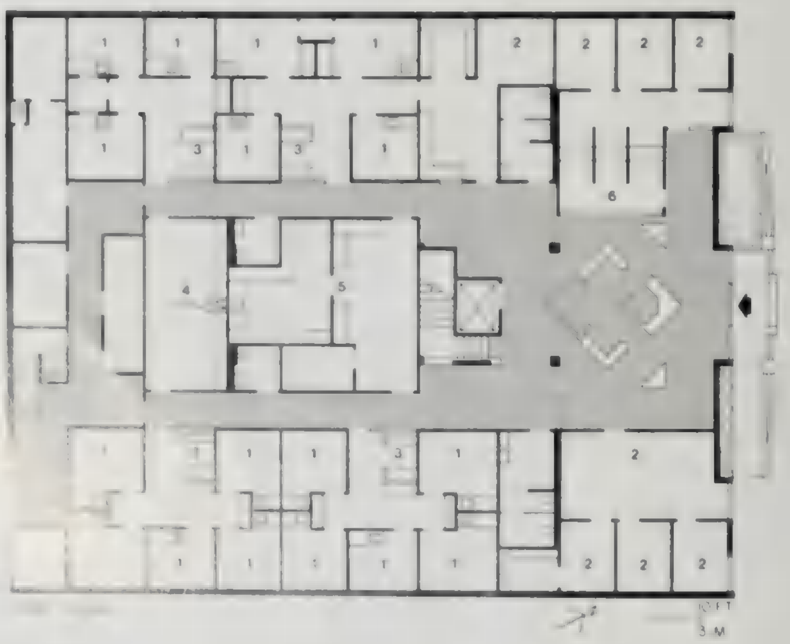
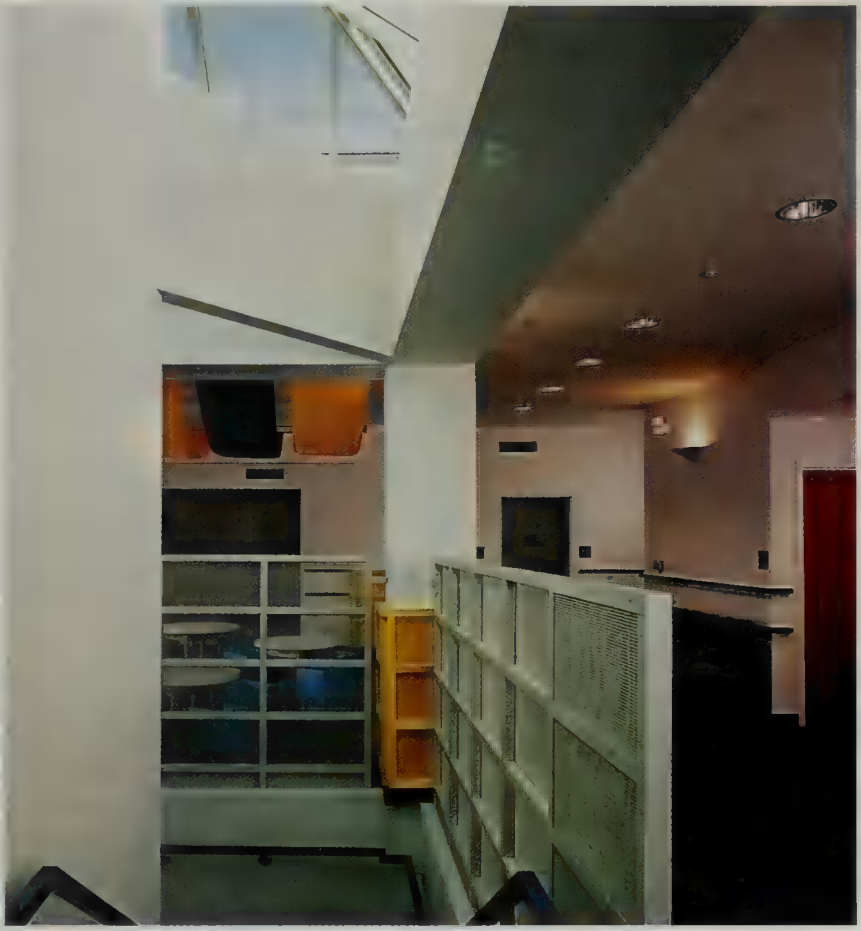


FIRST FLOOR

Credits:
Primary Care Clinic
Children's Hospital Oakland
Oakland, California
Owner:
Children's Hospital Oakland, California
Architect: *The Ratcliff Architects—Don Kasamoto, principal; Jerry Mastora, project manager; Kava Massih, project designer; Ross Bogen, Stepannie Bartos, Leslie Arnold, project team*
Engineers: *Graham & Kellam (structural); Montgomery & Robert (mechanical); Silverman & Light (electrical)*
Consultant: *Dillingham Associates (landscape)*
General Contractors: *Scott Anderson Scott Anderson Construction*

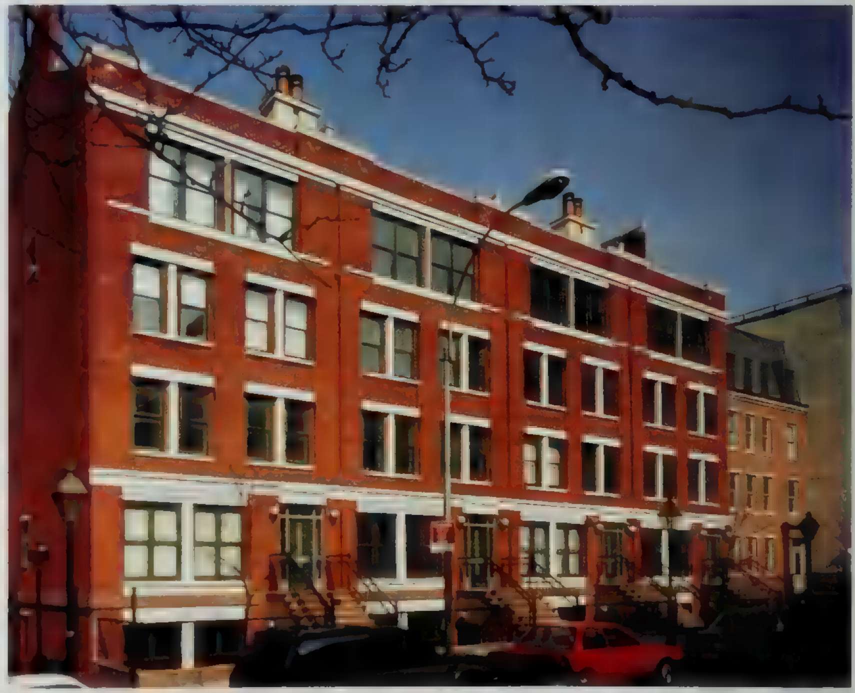


Focus on: A Rich Range of Recycled Buildings

A glance at the projects on these pages reveals diverse types of buildings being put to new uses and the reasons their conversions were successful. In Bridge Harbor Heights, buildings that had gone from residential to industrial uses revert to housing and extend an adjacent upscale historic district. The resulting élan has produced above-market rents that may well be ahead of those for an all-new project. Fisher-Friedman's conversion of a warehouse into offices provides affordable space for the architects and income from tenants besides. Gallery Frau was once office space that, due to the nature of a former redesign, was transformed to a gallery with surprising ease. The Fashion Center lobby is more a change of attitude

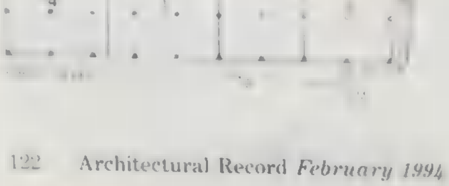
Bridge Harbor Heights Condominium Apartments

Brooklyn, New York City
Kweller, Dubin, Baumgarten, Architects
Platt & Byard, Consulting Architects for Design and Historic Architecture

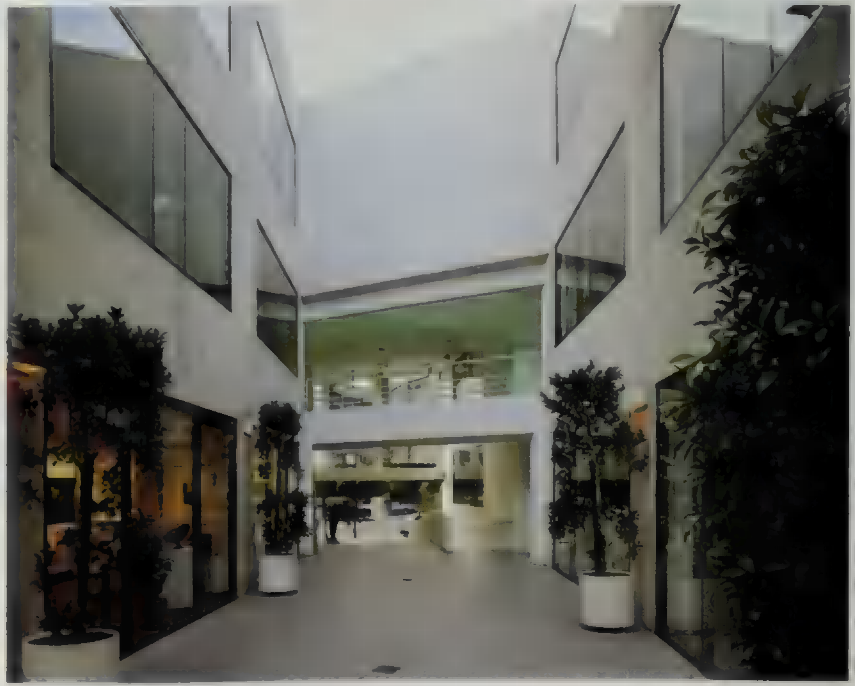


333 Bryant Street

San Francisco
Fisher-Friedman Associates, Architects



1 Fabric design
2. Art gallery
3. Architectural show room
4. Graphic design
5. Furniture show room



Charles Callison photo

than use. Typical of many such projects these days, it means to attract tenants by recapturing the elegance of the building's period character. Medical offices in a former supermarket by Gran Sultan create new space at a rock-bottom price. At the Church of the Covenant, the architects face up to problems of an inner-city religious building's survival. National Hall became a hotel after many previous reincarnations. And Burnstudio fits right into a former union hall. C. K. H.

Bill Kontzias

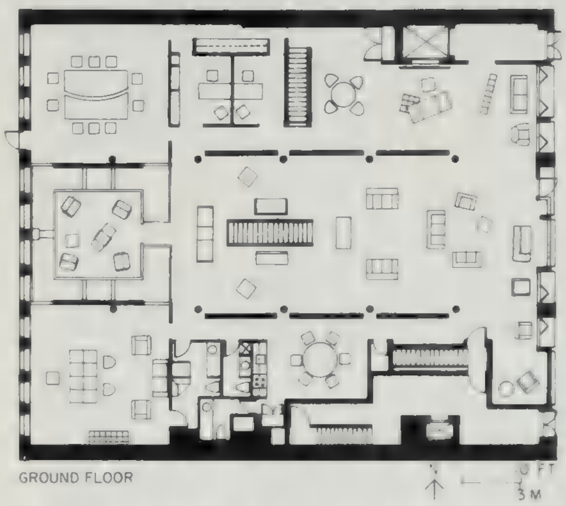
From down-and-out to up-and-coming
This mixture of new and rehabbed housing was made possible by adaptive reuse. The site was a block of vacant lots and derelict light-industrial buildings. The buildings were built in the 19th century as an orphange (dormered roof in photo this page), apartments, and private houses and later converted to factory use. The site was too valuable to ignore, but presented a problem most developers did not want to tackle: it was adjacent to the intersection of two busy elevated highways. Yet, it was also part of the Brooklyn Heights Historic District, an otherwise prestigious residential neighborhood. One developer finally saw that market-rate housing would be economically feasible, had plans prepared, and started foundations—but then had trouble getting the planned combination of new low-rise buildings and renovated existing structures past the watchful eye of the city's landmarks commission. Enter architects Platt & Byard. They discovered that the commission expected stricter restoration standards for the existing structures, and more distinction between them and the new ones (photo, opposite). *"Façade accomple,"* jokes Charles Platt after the architects had helped the client express the true spirit of the recycled buildings. *C. K. H.*

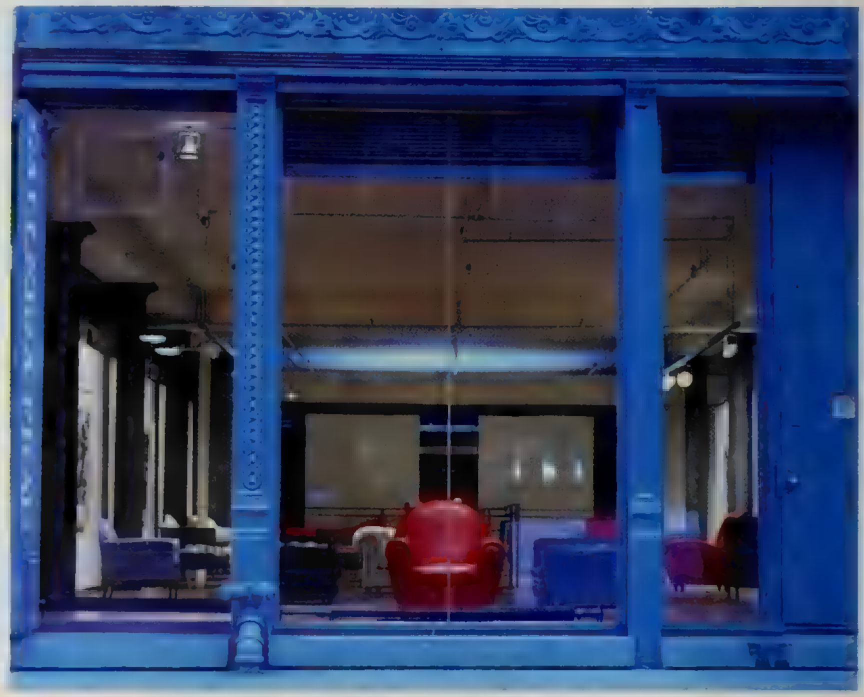
Phil Harvey photo

Architects convert warehouse to offices
Located in San Francisco just off I80, 333 Bryant Street is a five-story former warehouse converted to offices by Fisher-Friedman Associates. The building functions as a "design house" for the south of Market Street community: the firm's own offices are located there, as well as the offices of graphic-design and textile-design firms, engineers, landscape architects, a reprographics company, and a furniture showroom. The 1920s building was originally built around a curving railroad spur which terminated at loading docks between two wings of the building. When the building was remodeled, the heavy timber trestle that supported the tracks was replaced by a concrete floor, and the area it once occupied was left as an open entry court for the building (photo opposite). Fisher-Friedman's own offices include a generously sized waiting area where presentation boards are displayed, and a second room featuring architectural models that doubles as a photo studio (photo left) and a photo archive. The original concrete columns and ceiling were left exposed. Because the structure was concrete, the firm avoided many of the problems and costs associated with rehabilitating masonry structures, which must be extensively stabilized in this earthquake-prone area. *C. D. L*

Galleria Frau

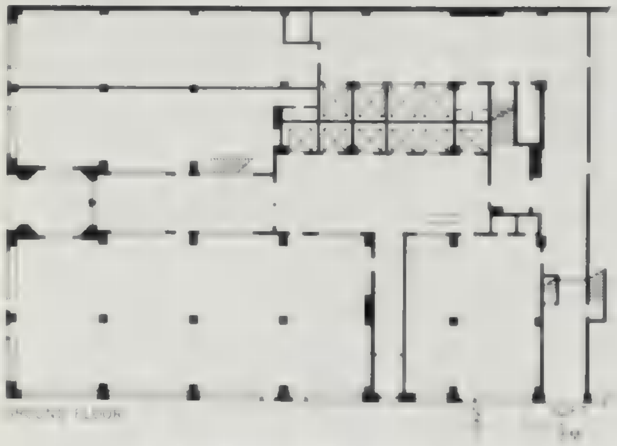
New York City
Vignelli Associates, Architect

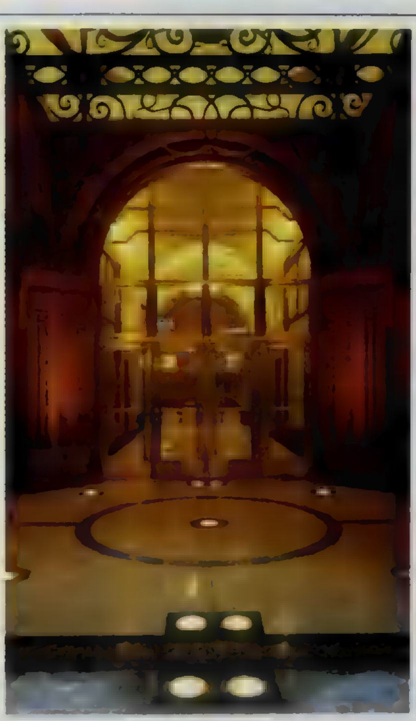


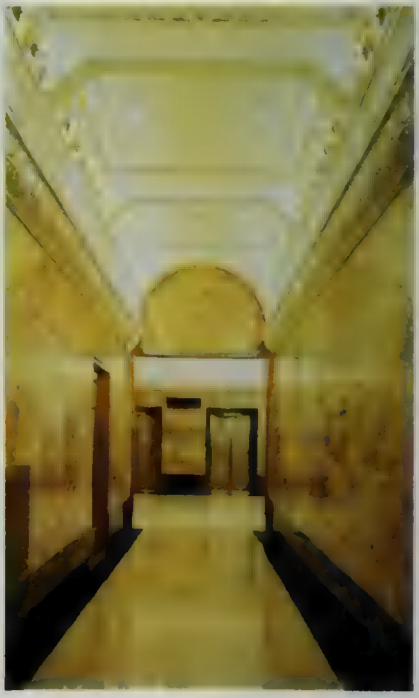


Fashion Center Building Lobby

New York City
George Ranalli, Architect



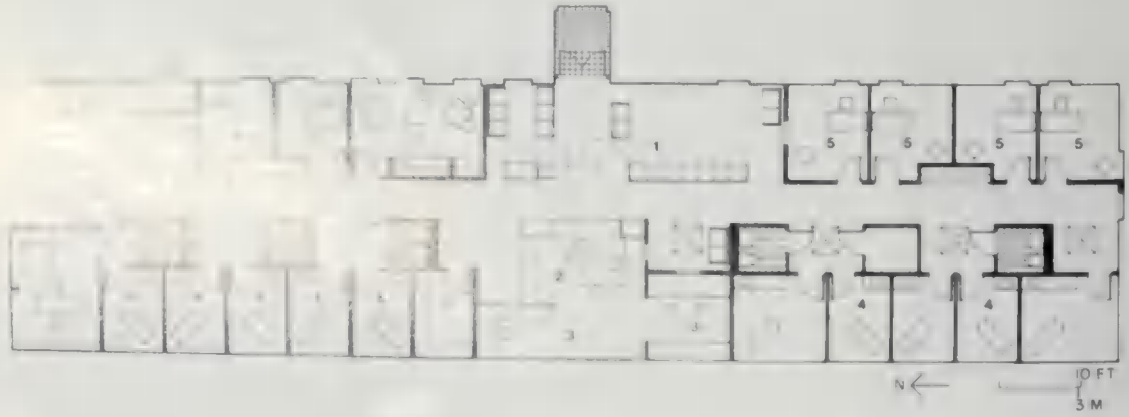


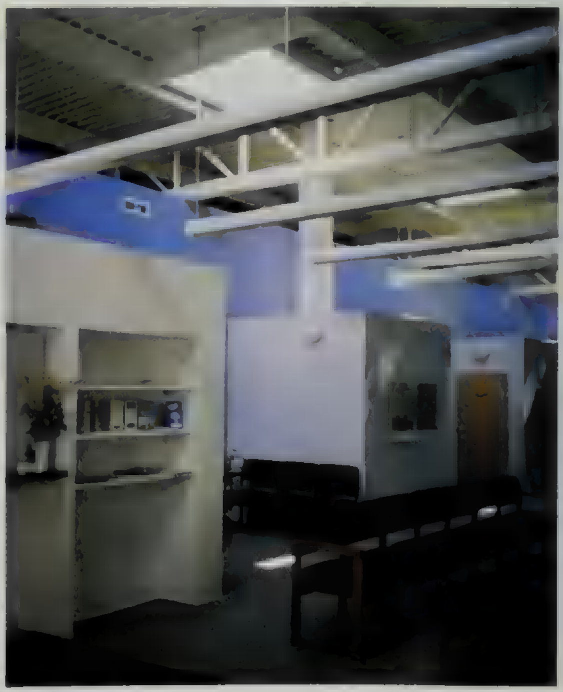


Valley Medical Associates Offices

Hudson, New York
Gran Sultan Associates

1. Waiting
2. Reception
3. Business
4. Exam
5. Office
6. Lab





© Antonia Mulas photos

Renovating a renovation

Asked to remake a 10,500 square-foot loft space in New York City's SoHo district, Vignelli Associates developed a dual strategy of addition and subtraction. Built in 1897 by Louis Korn, the space's previous incarnation was as an art gallery and publishing offices designed by New York architects Henry Smith-Miller and Laurie Hawkinson. New tenant, Galleria Frau asked Lella Vignelli and her team to provide for furniture display and related activities. The architects removed steel and glass screens and office partitions to open up views in the front and core of the space. They retained two parallel concrete block walls that run the length, but cut out slots around the columns so they stand unencumbered. The columns were stripped of white paint to reveal their original cast-iron finish and block walls were laminated with gypsum board to make a backdrop for brightly colored furnishings. Downstairs, offices were dismantled and combined with storage space to create a theater for lectures. Alterations to the exterior were minimal since the building is located within a historic district overseen by the New York City Landmarks Preservation Commission. Sandblasted glass panels were replaced by clear glass and a new logo was added. *K. D. S.*

Catherine Bogert, photos

Returning a great public room to its former glory

In restoring a series of public spaces leading from a bustling avenue to an inner lobby, architect George Ranalli found himself playing both detective and interpreter. The focus of his attention was one of the later works of Henry Ives Cobb, the architect responsible for the Gothic campus of the University of Chicago. Designed as a high-rise Romanesque Revival fortress in 1923, the Fashion Center Building blends historical decoration with a Modern approach to massing and transparency. Most of this work was covered by renovations made in the 1950s and '60s, requiring Ranalli to peel away hung ceilings and plaster walls. Fortunately, much of the original decorative plaster and terracotta was still in place and could be repaired. Where pieces were missing or damaged, Ranalli fabricated new ones using the original casting process. Where no documentation of the original elements was left, Ranalli created Modern designs that sit comfortably next to Cobb's work. Such new pieces include a terrazzo floor embedded with 15 lamps in the outdoor vestibule off Seventh Avenue (left opposite), gold-leafed plaster vaults in a side vestibule off 38th Street (right opposite), and a sheet-bronze reception desk in the main lobby (left). *C. A. P.*

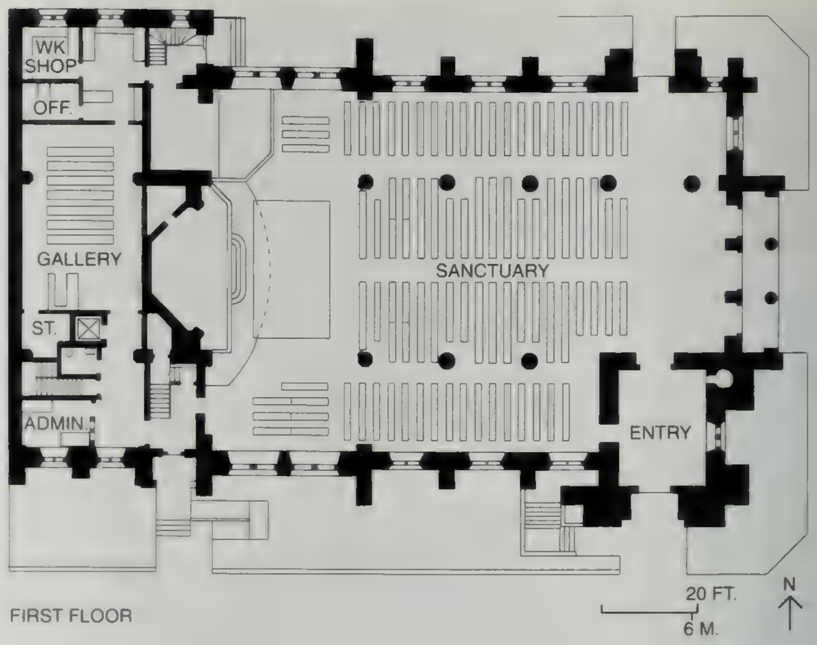
Kathleen Vernier, photos

Check aisle two for oncology

After six months of shopping for new space for its expanding medical practice, Valley Medical Associates finally found what it sought—at the supermarket. Located downtown and close to Columbia County Memorial Hospital, the brick supermarket offered the kind of low-budget, flexible space, and possibilities for future expansion perfect for a multi-discipline group medical practice. Architect Warren Gran took full advantage of the 16-foot-high ceilings to create an airy setting with exposed trusses and vents. By punching a few windows into the existing brick shell and cutting nine 4-foot-square skylights into the roof, Gran brought in plenty of daylight. The basic design concept was to insert offices, exam rooms, and treatment rooms as individual containers within the general volume of the clinic. Because doctors and nurses spend more time moving between exam rooms than they do within their offices, circulation and the spaces between rooms were crtical to the overall design. By creating a sense of openness and using a palette of soft grays, blues, greens, and whites, Gran gave the clients what they asked for: a facility that would be positive and hopeful, without being frivolous. *C. A. P.*

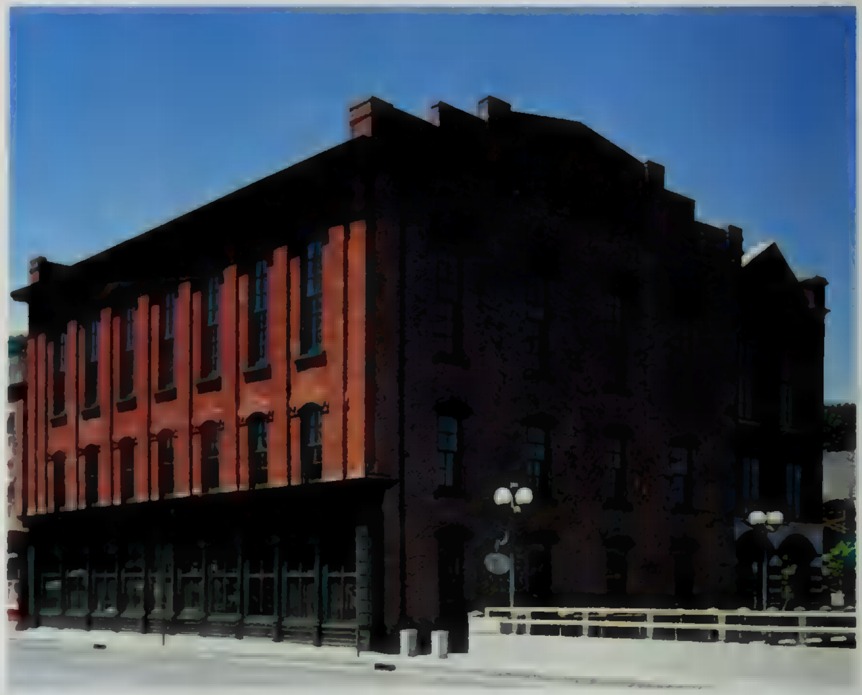
The Church of the Covenant

Boston
Ann Beha Associates, Architect



National Hall

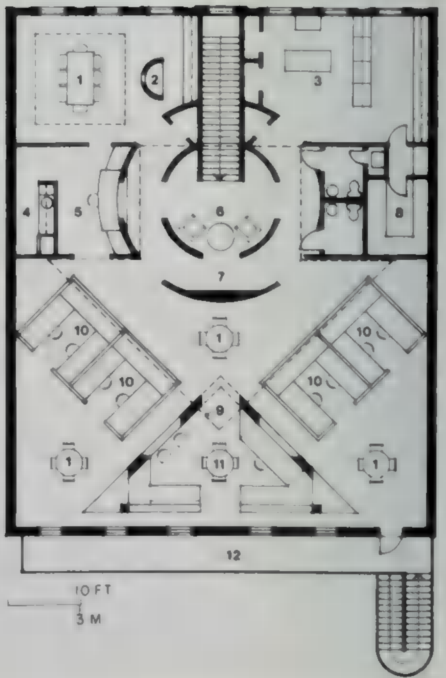
Westport, Connecticut
Ferris Architects



Burnstudio Building and Offices

Raleigh, North Carolina
Burnstudio Architects

1. *Conference*
2. *Slide booth*
3. *Product/print*
4. *Kitchen*
5. *Reception*
6. *Waiting*
7. *Gallery*
8. *Darkroom*
9. *Skylight above*
10. *Office module*
11. *Principal*
12. *Courtyard balcony*



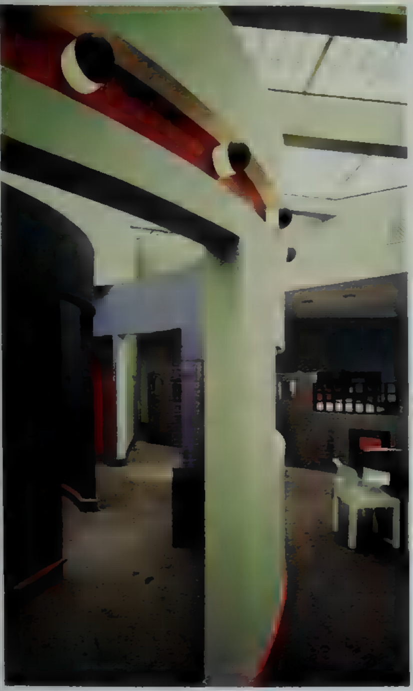
© David Hewitt/Anne Garrison

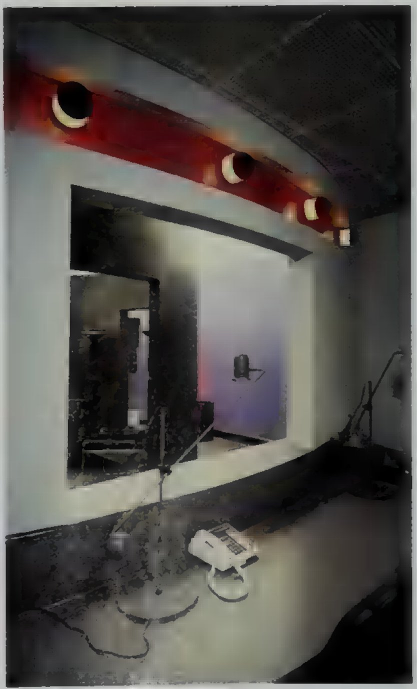
Saved from the wrecker's ball

The years from 1875 to roughly 1920 yielded in what we now call inner cities hundreds of substantial churches erected to accommodate the great population surges of those years, and often built at great sacrifice by modestly endowed congregations. Their descendants have now largely moved to the suburbs, leaving behind structures costly to operate and maintain. A fine example of enterprise triggered by these challenges is the Church of the Covenant, which renovated its Parish House to twice the original square feet (plan, opposite), giving over 80 percent of its space to such uses as a soup kitchen for homeless women, a social-services center for the elderly, and an income-producing commercial-art gallery. A second part of the $1.35-million project, of which 55 percent came from donations by the congregation, with the rest raised (with the architect's help) from corporate and foundation grants, was adaptation of the Sanctuary (left, and plan) to added use for dramatic performances. Restoration included stabilizing Louis Comfort Tiffany's magnificant 1884 stained glass windows and chandelier. The outcome shows how a determined congregation is able, with counsel from its architect, to turn an urban landmark, once threatened with demolition, into a vital force. *S. A. K.*

Against all odds

Architects can prove their worth by reconciling the often-conflicting demands of today's society, according to Roger Ferris. He refers to the maze of some 47 federal, state, and local regulatory agencies that his firm went through to bring Westport, Conn., a facility now praised by users and local citizens. The project is the conversion of an 1873 municipal building into a restaurant and hotel, which has brought new life to a previously ignored part of town. It was the building's intended use, waterside site, and National Register status that required so many approvals. But the architects faced structural problems as well. Foundations had sunk. The masonry bearing wall and heavy-timber construction was tired, and the brick and cast-iron front wall had never even been attached to the sides. Ferris wove in a new steel frame to bolster the existing structure, managing to preserve, in the process, such spaces as the stairwell (photo, left). Another major problem was functional: the need for entry to the new hotel and restaurant where cars could pull off the street—from the previous rear facade, which had never been finished. The architects solved this with a small compatible addition with a ground-floor colonnade replacing the typical hotel canopy. *C. K. H.*





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From labor union hall to architect's offices

The recycling of this 7,800 square-foot commercial building, erected around 1900, has become a milestone in the revitalization of downtown Raleigh's historic Moore Square district. Cleaning, restoring, and painting the Italianate street facade (opposite, far left) helped bring back a sense of dignity to the street. Inside, Burnstudio principal Norma DeCamp Burns took advantage of the openness and daylight of the old union hall by setting up a hierarchy of spaces that radiate from the central entry at the top of the long stair (floor plan, opposite). The large central skylight, partial-height screen walls, and custom-designed work stations create a progression from public to private spaces. The wood and plastic-laminate workstations combine surfaces for drawing, layout, and display with general and flat-file storage within a single vocabulary. The insulated skylight (left) offers generous daylight. The work includes a new mechanical system.Fans distribute the heat, windows are operable, and heat pumps provide efficient zoned heating or cooling. The simple forms and bold color preserve the feeling of the union hall's original open floor, and, for a modest $61 per square foot, express the architect/landlord's commitment to preserving a part of Raleigh's inner city. *S. A. K.*

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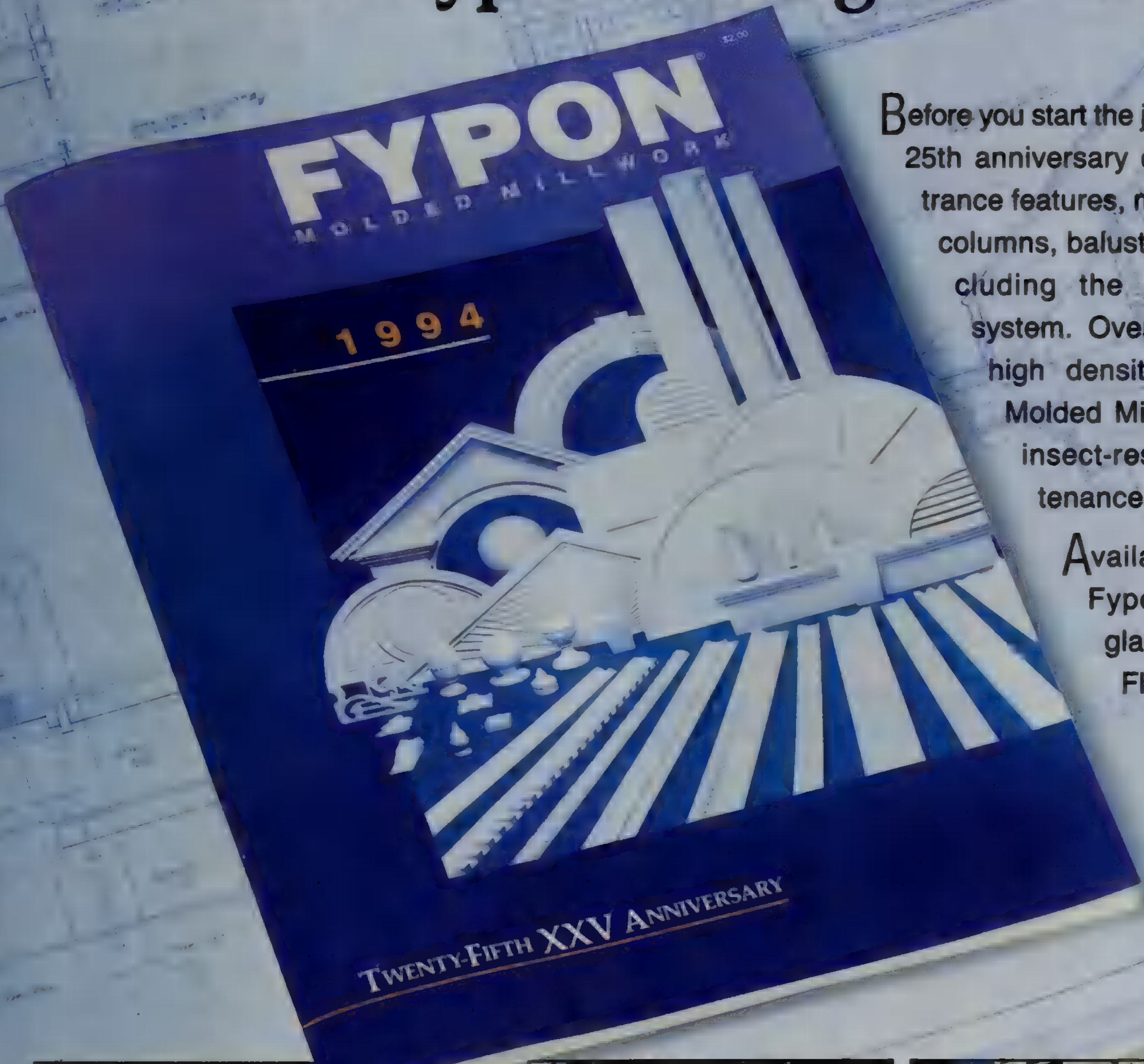

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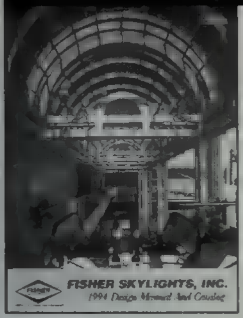
Product Literature/Roofing

400. Roofing CAD
BondCote single-ply hot-air-welded membrane is offered in five FM Class 1 configurations for mechanically attached, fully adhered, and ballasted roofing systems. Detail drawings for all installations are now available on a free PC- or Mac-based software program. BondCote Roofing Systems, LaGrange, Ga.*

401. Natural-slate roofing
A color brochure explains why the 1/4- to 5/8-in. thickness of Eurocal slate provides a distinctive look on large roofs, and illustrates eight of the 25 different colorations available in stock from warehouses in California, Texas, and South Carolina. Eurocal Trading, Inc., Pleasant Hill, Calif.



402. Glazed skylight systems
A 24-page architectural guide illustrates dozens of structural and unit - skylight configurations, including large movable Roll-A-Way roofs and welded segmented vaults. All glazing and finish options are shown. Fisher Skylights, Inc., Division of Four Seasons Solar Products Corp., Holbrook, N. Y.

Uses of Lead in Industrial
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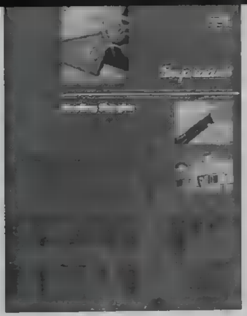
403. Roofs of lead
Brochures detail the use of lead in historical structures from Monticello to St. Paul's Cathedral, and explain the advantages of a new design for flat roofs, which incorporates welded-seam sheet-lead in an insulated-membrane assembly. Lead Industries Association, New York City.

404. Sheet-steel roofing
A data sheet describes structural and architectural Galvalume SSRgenerically, giving installation details for new and retrofit standing-seam roofs. Lists test and weathering data for both bare and pre-painted metal panels. Galvalume Sheet Producers of North America, Bethlehem, Pa.



405. Fireproof shingles
Colorful catalog insert illustrates all seven styles available in fiber-cement roof tiles made using a steam autoclave process. Includes cedar- and slate-look products as well as traditional lap and hexagonal profiles, available in a range of eight colors. Supradur Mfg. Corp., Rye, N. Y.

** Product Data on CAD disk*
For more information, circle item numbers on Reader Service Card.

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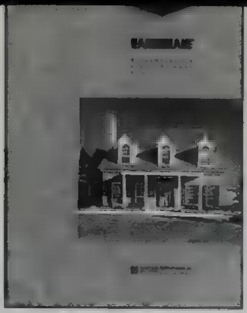
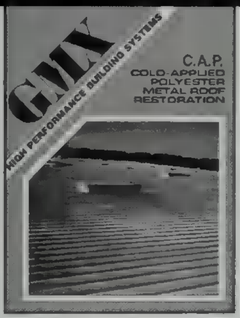
Product Literature/Roofing

406. Roofing-pitch spec quide
A 1994 catalog offers updated product information on Black Armor coal-tar membranes, roof insulations, and waterproofing systems. Flashings and other installation details included; electronic catalog and specification software programs are available. Allied-Signal, Inc., Morristown, N. J. *

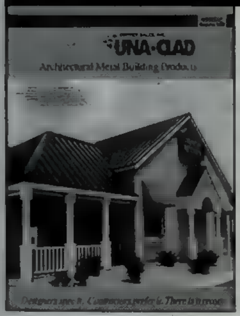


407. Wood-look shingles
Hardishakes are made of noncombustible fiber cement to resemble cedar shakes. A design guide includes in-use photos showing all six colors, describes Class A and B installations, and illustrates specific details such as staggers, valleys, and flashings. James Hardie Building Products, Inc., Fontana, Calif.

408. Roof-insulation guide
Manville offers a 48-page manual describing all of its roof-insulation products, including isocyanurate boards in configurations to meet specific built-up and single-ply roof-system requirements, both with and without a vapor retarder. Schuller, Manville Roofing Systems, Denver. *



409. Metal-roof restoration
Polymer-modified Ultra-Shield metal rustproofing is described as an asbestos-free asphalt roof coating that cures to a smooth finish and resists cracking and sagging. Its reflective finish is said to resist UV deterioration and reduce under-roof temperatures. GMX Cleveland.

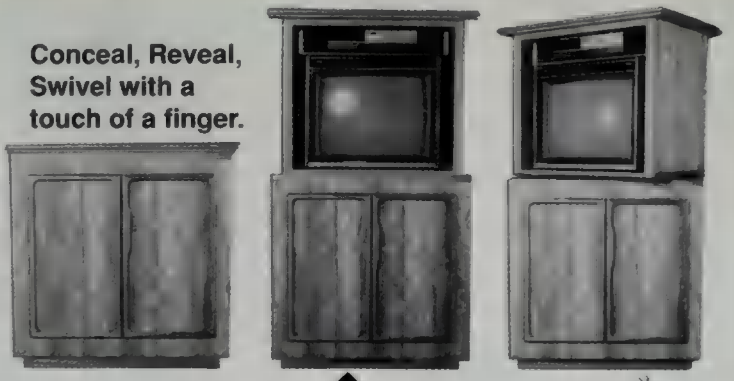


410. Architectural metal
A 12-page architectural-metal building-product catalog gives an overview of cladding panels and column covers, and includes details on all UNA-Clad roofing systems such as standing-seam, lock-formed standing seam, flush panel, and snap-on batten systems. Copper Sales, Inc., Minneapolis.

411. Curved-end shingle
The Presidential Shake is said to combine the beauty of historic wood shakes with the advantages and safety of modern asphalt/fiberglass construction. Class A rated for both fire- and wind-resistance, the laminated roofing product comes in six colors. The Celotex Corp., Tampa, Fla.

** Product Data on CAD disk*

For more information, circle item numbers on Reader Service Card.



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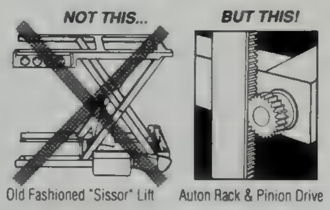

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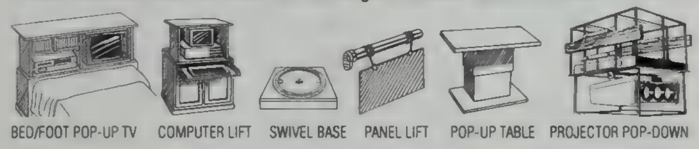

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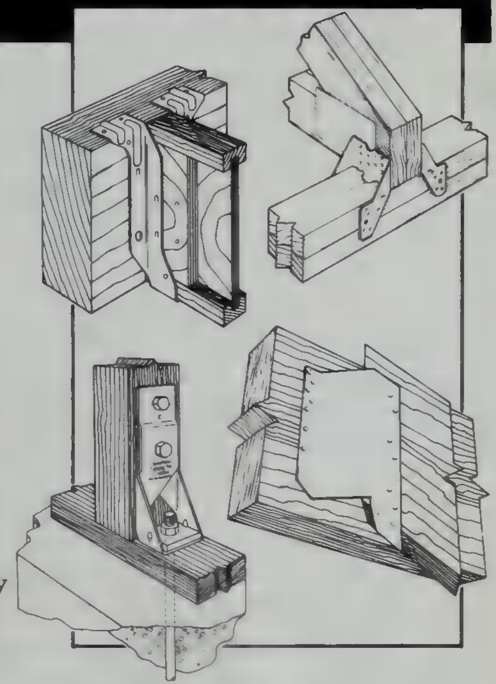

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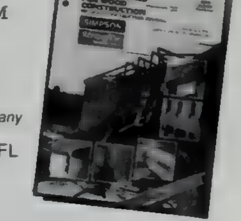

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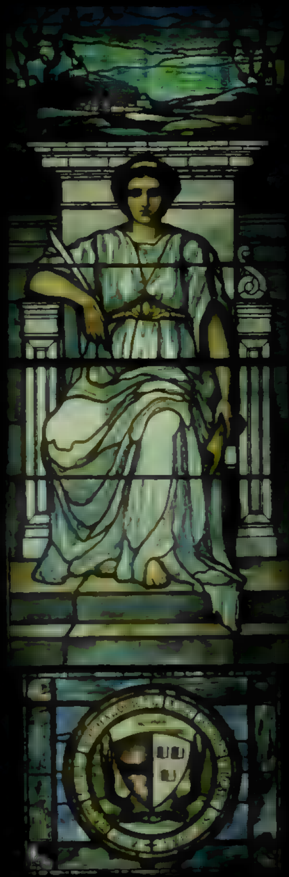
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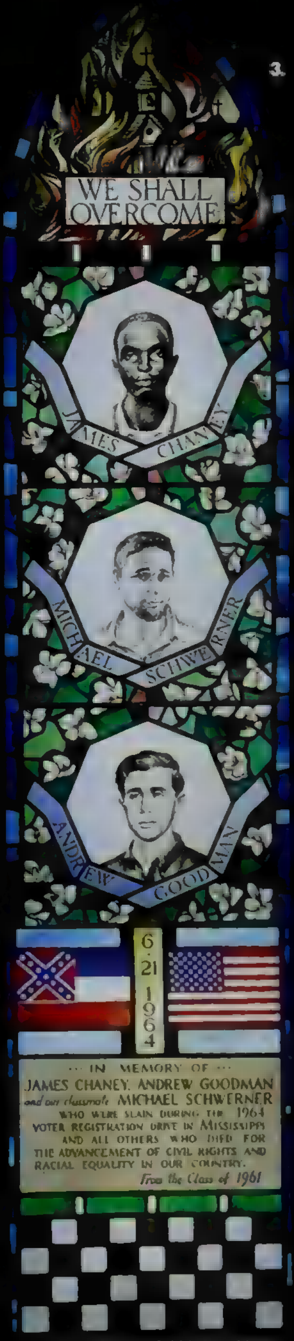
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2. NY GENEALOGICAL SOC. Original 1898, R&J Lamb. Document, disassembly, cleaning, conservation. Design, fabricate wood framework. Reinstallation.

3. CORNELL UNIV. CHAPEL Class ('61) memorial, civil rights workers. Concept, fabrication, installation. Albinus Elskus Artist.

4. McCORMICK SPICE CORP Design, fabrication and installation, atrium dome. Gaudreau Inc. Architect

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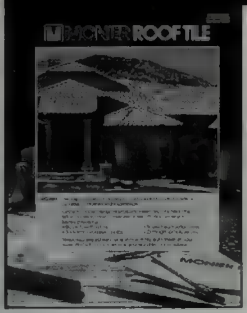
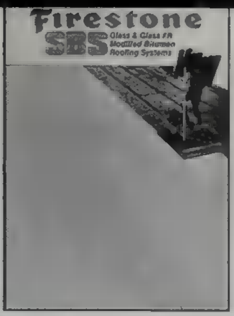
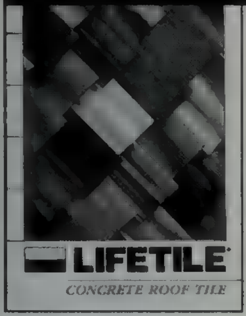
Product Literature/Roofing



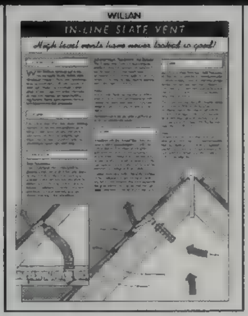
412. Concrete roof tile
A roof-tile portfolio highlights all shapes and profiles offered by this maker of premium concrete tile. Individual catalogs focus on specific products, such as color-through tiles in Southwestern-desert colorations, offered in Mission S and Homestead (shake-look) styles. Color range and weathering data given for each roof design. Monier, Orange, Calif.



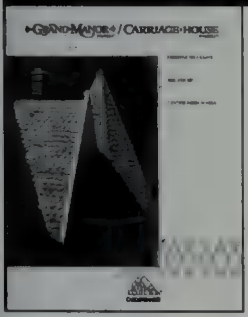
413. SBS-modified bitumen
Technical literature explains the installation and performance benefits of mop-applied, fiberglass-reinforced SBS-modified bitumenous roofing membranes: SBS Glass and SBS Glass FR. Products are part of a complete line of modified-bitumen and EPDM single-ply commercial roofing products. Firestone Building Products Co., Carmel, Ind.



414. Cementitious tiles
Lifetile roofing comes in a standard series, with a heat-fused color surface capable of brighter, more defined colorations, and Colorthru products, an integrally colored concrete tile with a more subtle effect. Tiles are self-aligning in any of four different profiles. Lifetile, division of Boral Industries, Inc., Lake Wales, Fla.



415. Vents for slate roofs
The Willan in-line vent is said to be almost invisible when installed in new or existing slate roofs, without cowls or other protrusions that spoil roof lines. Made in colors to match both new and aged slate colorations, the British-made vent can be adapted for use as a plumbing vent as well as an attic ventilator. Clark Matthews & Co., Buffalo.



416. Distinctive shingles
A colorful brochure illustrates how combining two different styles of laminated shingles--Grand Manor and Carriage House Shingles--can achieve custom roof looks with subtle patterning or Victorian-era floral, fish-scale, or diamond designs. Shingle colors are complementary across both product lines. CertainTeed Corp., Valley Forge, Pa.

417. Roof-design software
TAM-CADD interactive software is said to let architects, spec writers, and other roofing professionals easily produce construction-detail drawings, specifications, and lists of materials for both modified and built-up roof installations. Working with AutoCAD 10 or higher, program incorporates UL code-compliance options. TAMKO Asphalt Products, Inc., Joplin, Mo. *

* *Product Data on CAD disk*

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Manufacturer Sources

For your convenience in locating building materials and other products shown in this month's feature articles, RECORD has asked the architects to identify the products specified.

Pages 88-93
Old Bird House
Davis, Brody & Associates, Renovation Architects
Roofing membrane: Carlisle SynTec Systems. Metal roofing: Superior Roofing. Steel-framed windows: Hope's Architectural Products, Inc. Skylights: Wasco. Entrance, cabinetry, and paneling: GER Woodworking. Interior wood doors: Eggers Industries. Locksets: Schlage Lock Co. Paints: Benjamin Moore & Co. Laminate surfaces: Wilsonart. Reception-area casework: Thomas Moser. Interior lighting fixtures: Paul Hanser; Boyd Lighting; Harry Gitlin; Lightolier, Inc.; Edison Price; National; Limburg; Baldinger Architectural Lighting. Special fixtures: Lam Lighting. Elevators: Dover.

Pages 98-101
Brooke Russell Astor Reading Room
Davis, Brody & Associates, Architect
Singly-ply roof: Sarnafil, Inc. Wood doors: Bretton Woodworks, Inc., Library shelving: Bedcolab (Canada). Interior lighting: Elliptipar, Inc. Special fixtures: Nessen.

Pages 102-107
Adelbert Hall, Case Western Reserve University
R. M. Kliment & Frances Halsband Architects
Sandstone cladding: Scotstone, Inc. EPDM roofing membrane: Firestone Building Products. Lead-coated copper-sheet roofing: Weathermark Corp. Slate-shingle roof: Vermont (Strata Gray). Aluminum-framed windows: Precast Services, Inc. Skylight system: Super Sky Products, Inc. Laminated glass in clerestories: Empire Glass. White-oak entrances and red-oak veneer interior doors: Gleeson Construction. Lever-handle locksets: Schlage Lock Co. Butt hinges: McKinney. Closers: LCN Closers. Cabinet hardware: Ives. Acoustic ceiling: Celotex Corp. Grid: Donn (Fineline). Custom cabinetry: Gleeson Construction; Nagele Manufacturing. Paints and stains: Sherwin Williams Co. Fabric wallcoverings: Maharam (Omni). Wall and floor tile: American Olean. Flooring: Vermont Slate (Green Mountain Mist). Carpet: Karastan/Bigelow. Reception-area furnishings: Bernhardt; HBF. Special sconces: custom by architect, fabricated by NL Corp. Conference lighting: Linear Lighting. Elevators: Schindler.

Pages 108-111
Industria Superstudio
Deborah Berke & Carey McWhorter, Architect
Windows: A&S Window Associates. Locksets: Schlage Lock Co. Hinges: Richards-Wilcox. Exits: Von Duprin, Inc. Paints: Benjamin Moore & Co. Stair treads: Flexco. Drywall partitions: USG Corp. Operable walls: Fairhurst Industries, Inc.

Pages 118-121
Primary Care Clinic
The Ratcliff Architects
Curtain-wall system, entrances: United States Aluminum Corp. Tinted glass: O'Keeffe's, Inc. Wood doors: Calwood. Sliders: Hufcor, Inc. Locksets: Schlage Lock Co. Cabinetry and paneling: Rod Hoffman. Stains: Behlen. Paints: Fuller O'Brien; Kelly Moore. Laminate surfaces: Nevamar; Wilsonart.

Pages 124-125
Valley Medical Associates
Gran Sultan Associates, Architect
Exterior lighting: Stonco. Ceiling grid: USG Interiors. Locksets: Russwin Hardware. Tile flooring: American Olean. Paints: Behr. Seating: Kimberly Scott. Interior lighting: Lol; Columbia; Legion.

Pages 126-127
Galleria Frau
Lella Vignelli, Architect
Furnishings and leather upholstery: Poltrona Frau. Sisal carpet: Carpet Innovations. Paint: Benjamin Moore & Co. Signage: King Products, Inc. Lighting: Lightolier, Inc. ■

Corrections
In the December issue, The Panda House at the Columbus, Ohio, Zoo, [Adaptable habitat, page 111] should have been credited to Schooley Caldwell Associates, architects.

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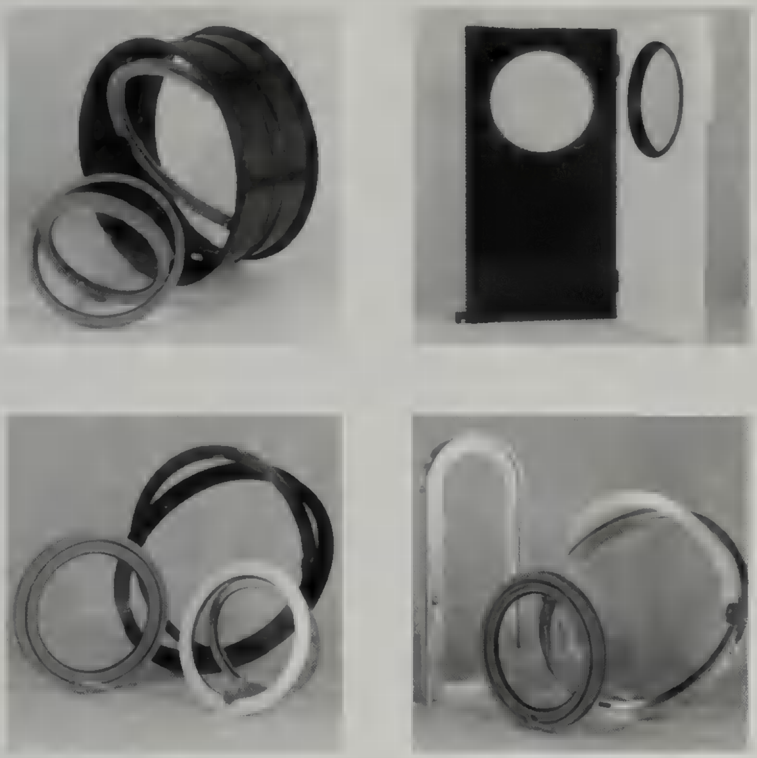

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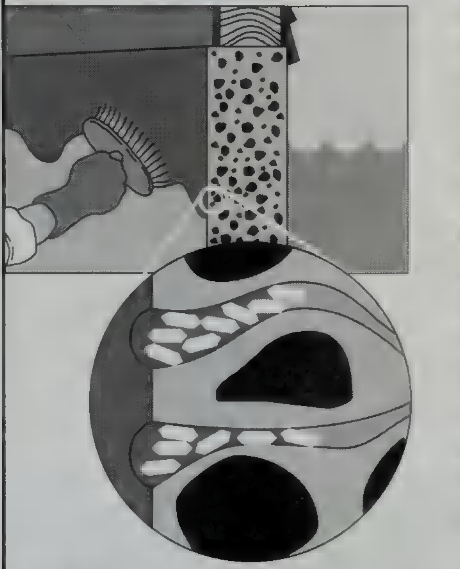

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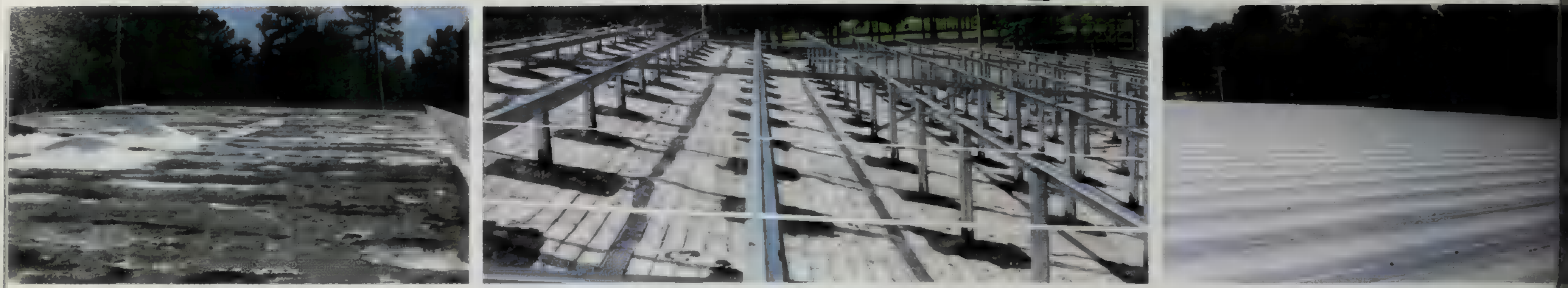

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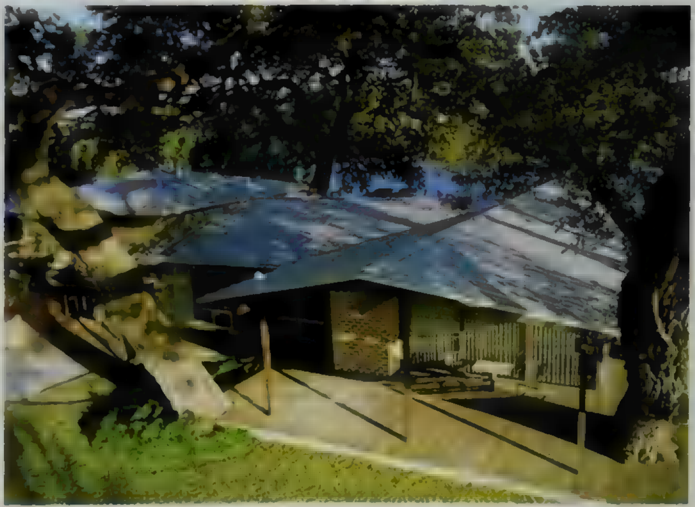

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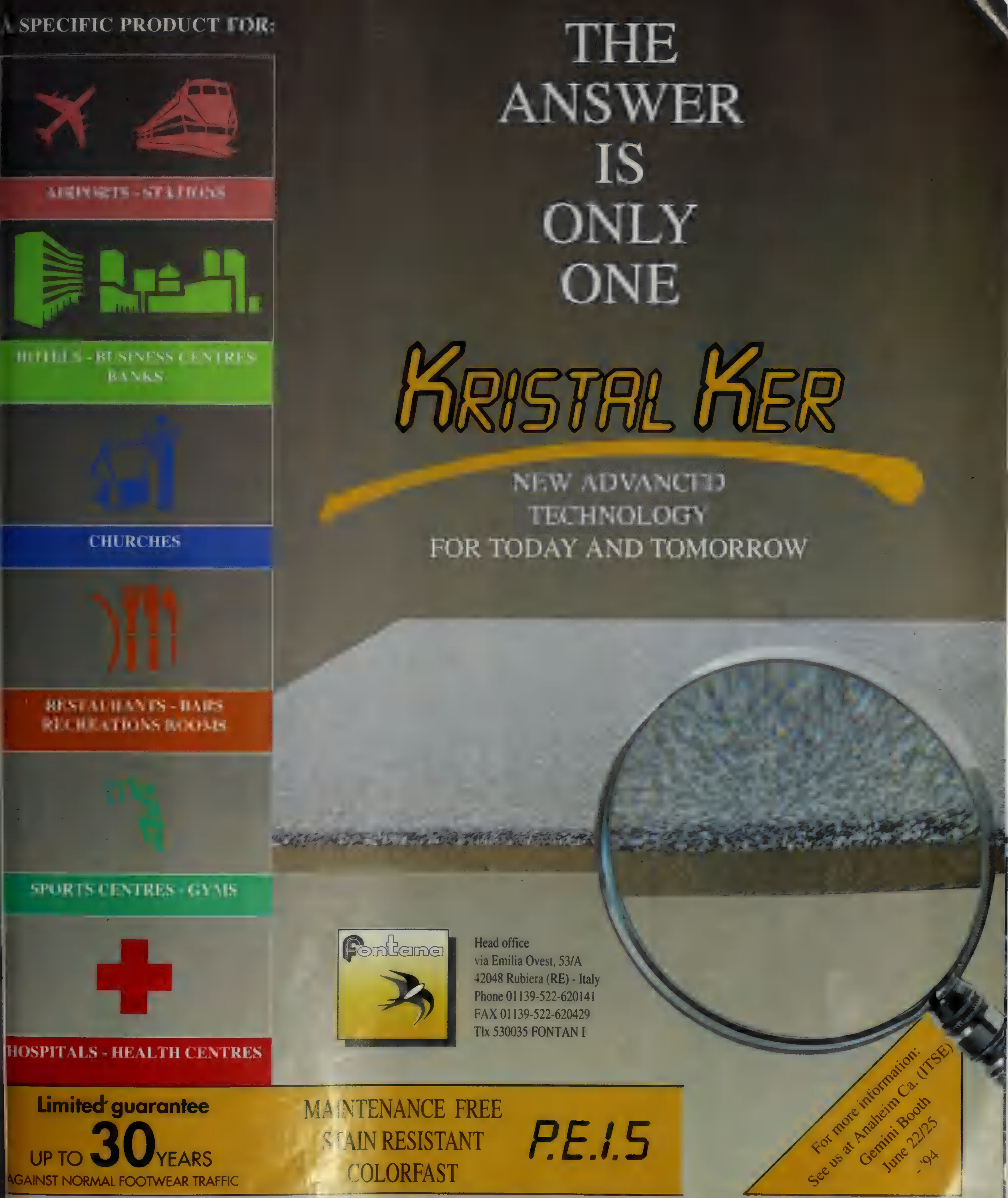

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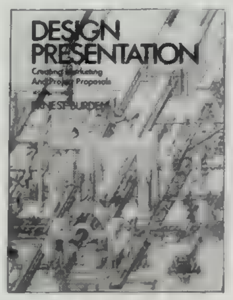

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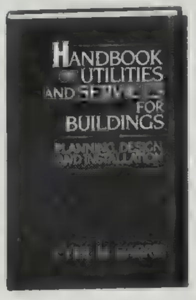

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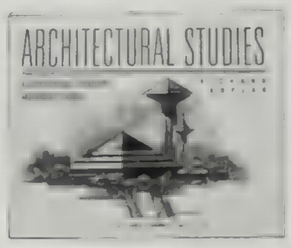

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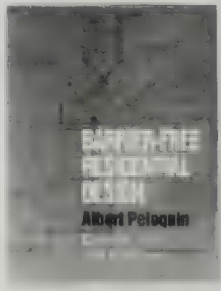

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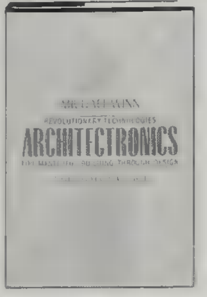

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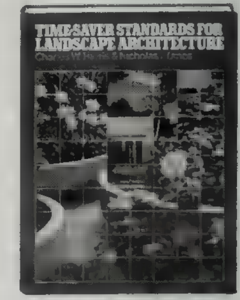

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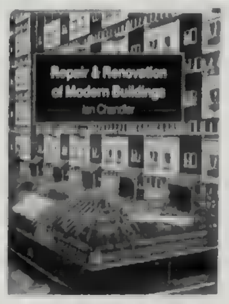

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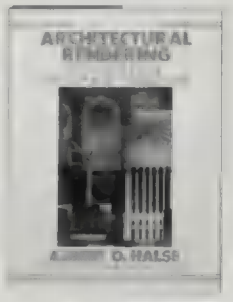

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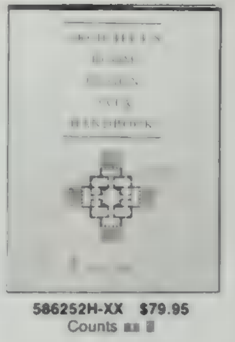

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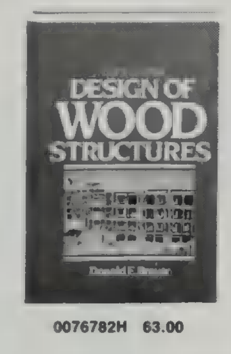

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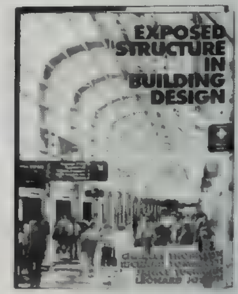

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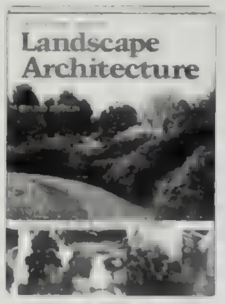

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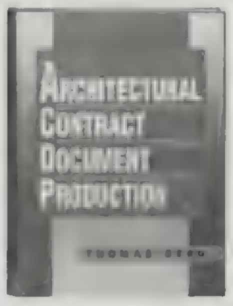

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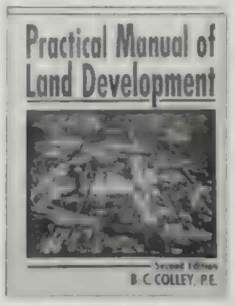

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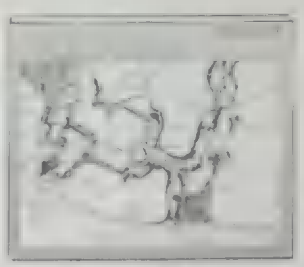

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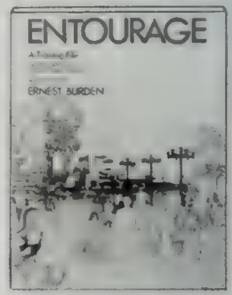

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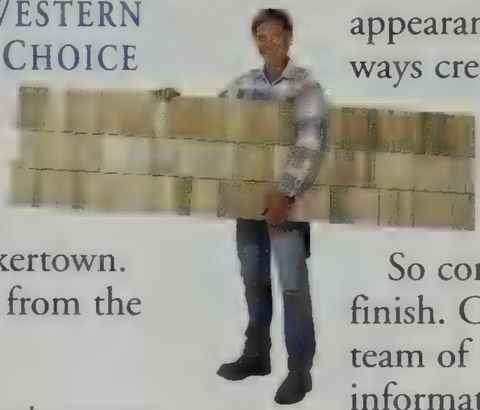

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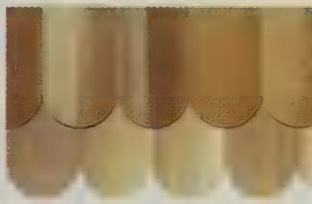

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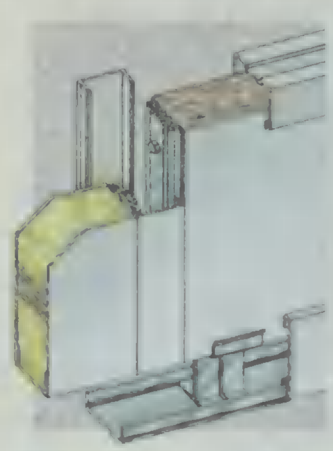

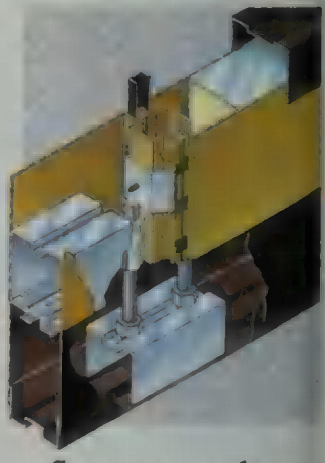

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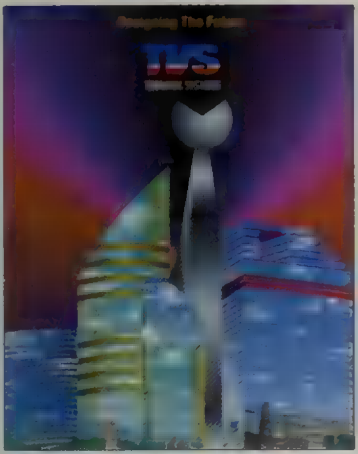

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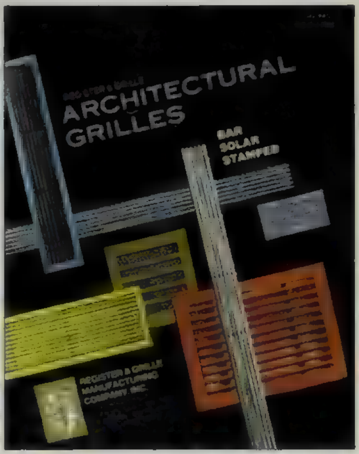

Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R&G offers architects and interior designers many ways to express the changing forms of metal with the integrity of R&G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your decor. 202 Norman Ave., Bklyn. NY 11222. 800-521-4895. Fax: 718-349-2611.

Register & Grille Mfg., Co.

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Door and Wall Protection Systems

IPC - Institutional Products Corporation is a manufacturer of high impact door, corner and wall protection systems. Our catalog illustrates a product line that includes Handrails, Corner Guards, Wall Guards, Kickplates and Wallcovering. Our durable vinyl products, offered in 50 designer colors, provide an attractive way to protect interior finishes from damage.

Institutional Prods. Corp.

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Newest Thermostat Models

More than just a heater - it's an investment in comfort that pays dividends in $$$'s! 99.9% efficient, fully automatic thermostat, easy to use automatic pushbutton ignition. Vent-free, patented ceramic burner plate technology delivers radiant and convection heat simultaneously. Get more than you bargained for $ for $ you can't beat a Rinnai. For information telephone: 1/800/62[illegible]-9419.

Rinnai America Corp.

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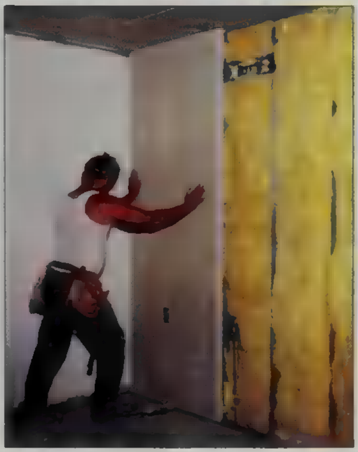
FiberBond® Wallboard



FiberBond® fiber-reinforced panels are made with recycled newspaper and designed for use in interior walls and ceilings, in both standard and fire-rated applications. Wallboard resists denting and breaking, meets ASTM C36 requirements, and is available in 3/8", 1/2", and 5/8" thicknesses, 4' widths, and 8', 9', 10' and 12' lengths. Underlayment and exterior wall sheathing also available.

Louisiana-Pacific

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CertainTeed Corp. now offers Meridian™, a distinctive siding with the natural wood-tones of semi-transparent cedar siding, without cedar's ongoing maintenance. Meridian has subtle, random streaks giving the appearance of wood's natural grain-color variations showing through the stain. Available in clapboard, shiplap and vertical/soffit styles with a rough cedar texture in five popular stain colors. Call 1-800-233-8990 for more information.

CertainTeed Corp.

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Product Literature Showcase

e Panels

Ultra-Lite high strength stone panels combine the natural beauty of real granite, marble or limestone with aluminum honeycomb. Ideal for new and renovation. Current reclad projects include Embarcadero Center, San Francisco; 9-story Rosemont Office Building, Chicago; and Arthur D. Little World Headquarters, Boston.

Stone Panels, Inc.

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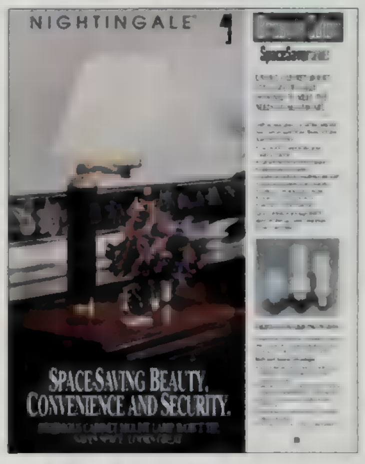
Brass 'n Color Spacesaver™



New Brass 'n Color Spacesaver™ Series bedside lamp for resident rooms features a secure cabinet mount to prevent tip-overs & tampering. Lamp is available in 7 standard colors & thousands of custom colors. Off-white PolyLast™ shade looks like fine linen pleatwork, but is actually made of a tough, high-impact polymer. Optional compact fluorescent model allows the use of low, energy-efficient bulbs, [illegible] up to 70% on energy consumption. Many other innovations for enhanced resident & staff security. Manufacturer offers Free 30-Day Trial. 3726 N. Booth St. Milwaukee WI 53212

Adjustable Fixture Co.

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All New 88-Page TimberForm Catalog

More than 350 products made of cast iron, perforated metal, steel, welded wire & wood are offered in a dozen different design series from traditional to contemporary. Ash receptacles, benches, bike racks, bollards, liter containers, picnic & game tables are presented in design-coordinated families. Over 170 designer colors are available. Photos, technical data & product dimensions are shown. Call toll-free 1-800-547-1940(ext. 502).

Columbia Cascade

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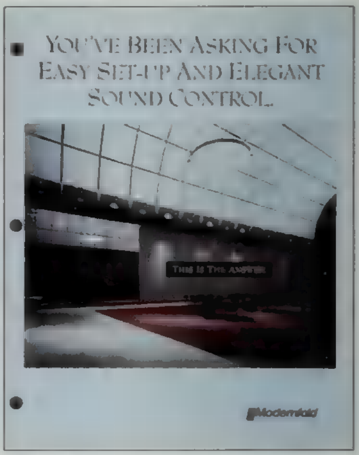
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Modernfold, Inc.

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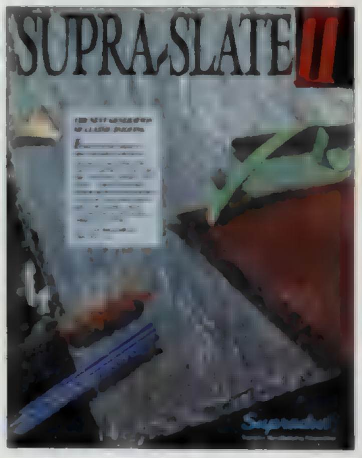
SLATE OF THE ART®



Supra-Slate II ® is an environmentally-friendly fiber-cement slate the only manufactured slate with an unpainted, "quarried slate" finish. It provides "A" class A" security, [illegible] protection and [illegible]

Supradur Mfg. Corp.

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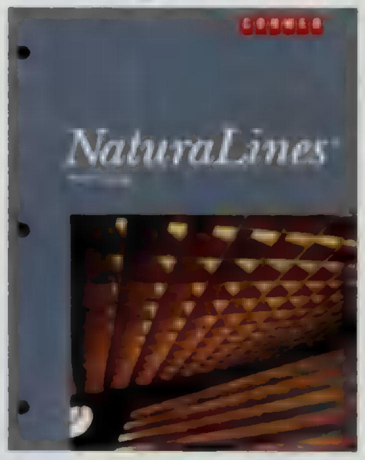
Decorative Wood Ceilings and Walls



NaturaLines™ wood ceilings and walls are available from Conwed in numerous styles and finishes. Wood ceilings and walls feature dynamic lines for such environments as hotels, banks, offices, reception areas, and schools. Styles include linear, louver, cellular, and coffer in woods such as oak, hemlock, maple or desired species. NaturaLines wood ceilings and walls are available in [illegible] walnut, mahogany, and custom stains or choose [illegible] finishes such as clear [illegible] Class A.

Conwed

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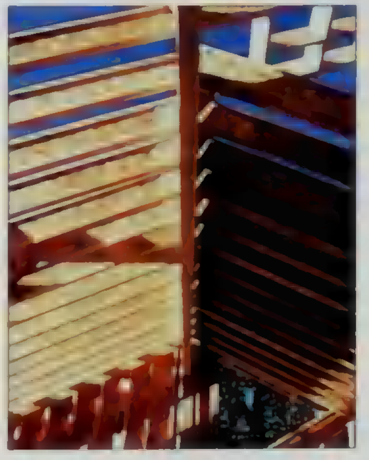
Engineered Wood Products



Engineered wood products are designed to eliminate the common problems of solid sawn lumber. Gang-Lam LVL and LPI™ Joists are stronger, more stable and easier to handle than solid sawn lumber. Catalog includes span and uniform load charts, and information on Wood-E® Cut and Wood-E® CAD engineering software also available.

Lousiana-Pacific

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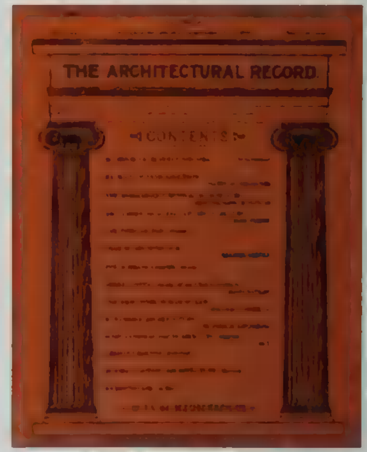

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Record Lighting

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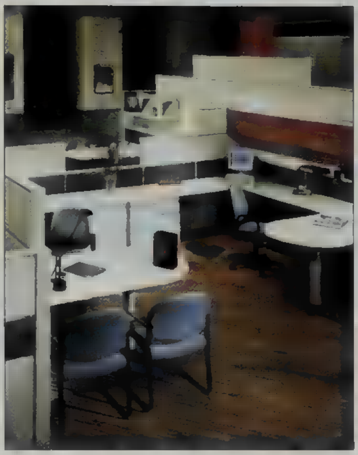
REASONS Stacking System for Improved Office Spaces



REASONS from Transwall Corp., a manufacturer of movable office partitions & systems furniture, is a new stacking system designed to provide improved office space facilities with maximum flexibility & a minimum of parts inventory. It offers quick off-module changes for work surfaces & overhead storage, which can easily be rearranged on horizontal rails without structural panel changes. Total wire management is provided in the 4" thick panels, as well as an unlimited choice of aesthetic color selections.

Transwall Corp.

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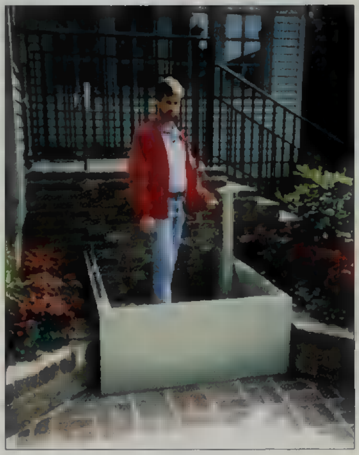
Everhard Lift



Now you can provide access for the disabled without altering the integrity of your building's design, especially important with historical, government and church structures. The **EVERHARD LIFT** disappears into the ground when not in use and is designed to comply with the Americans with Disabilities Act, as well as Interior Department Historic Preservation guidelines. The **EVERHARD LIFT** also complies with the ASME A17.1 wheelchair lift code. For a fee brochure, phone 606-231-1738 or order by fax at 606-255-7935.

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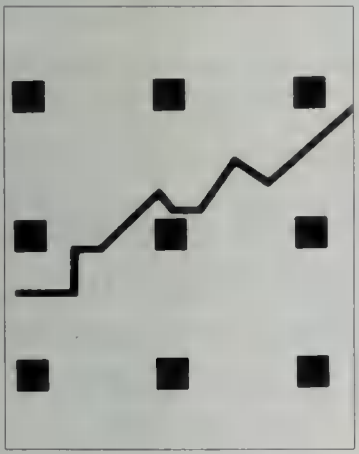

Don't forget to provide your local Dodge Reporter with the details and plans for your next job. You don't want them to miss out on the best bid for your next job. Contractors can't bid on jobs they don't know about. Thank you for your input. We appreciate your cooperation. F.W. Dodge, McGraw-Hill Construction Information Group.

F.W. Dodge

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Mercer Products

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Fire Retardants and Preservatives

Hoover Treated Wood Products' new 12-page Sweet's catalog features Pyro-Guard third generation interior fire retardant lumber and plywood for roof sheathing and other structural uses; Exterior Fire-X FRT lumber and plywood for decks, balconies, siding and other outside uses; and CCA preservative treated lumber and plywood that's kiln dried after treatment.

Hoover Treated Wood

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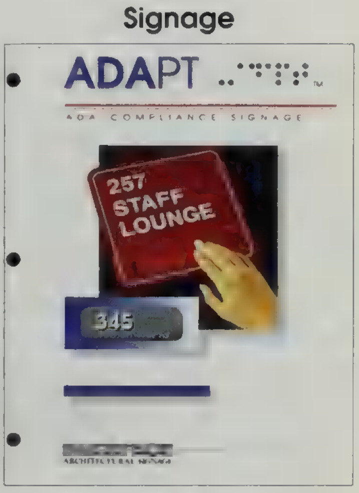
ADA Compliance Signage



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POSITIONS VACANT

State University of New York, Stony Brook University Hospital, Hospital Staff Architect. University Hospital is seeking an Architect experienced in healthcare renovation and alterations. Preference will be given to applicants with experience in a large teaching Hospital setting. Responsibilities will include planning, design, code compliance budget estimates, coordination and supervision of consultants, development of consultants, development of consultant RFP's and oversight of building construction/alterations. Minimum Qualifications: Bachelors degree in Architecture required; a Masters degree with emphasis in Health facilities planning is preferred. The candidate must possess a minimum of 10 years progressive planning experience in health facilities and be registered with the Architectural Board in the State of New York. Preference will be given to applicants with proven proficiency and experience with AUTOCAD version 11 or 12. Please send detailed resume and cover letter to: Mr. E.E. Anderson, Campus Architect, 120 Suffolk Hall, State University of New York, Stony Brook, New York 11794-6210. State University of New York is an EEO/Affirmative Action Employer. Applications for this position must be received no later than February 15, 1994. Acknowledgement will only be sent to shortlisted candidates under serious consideration.

OFFICIAL PROPOSALS

Request For Proposal

The Duck Valley Housing Authority (HA) is soliciting proposals for Architect/Engineering services for Housing Project NV 6-14 which consists of 32 Mutual Help single family homes that will be located on the Duck Valley Indian Reservation located on northern Nevada and southern Idaho border. The construction project will consist of 21 - 3 bedroom, 9 - 4 bedroom and 2 - 5 bedroom units to be constructed on scattered sites. The registered Engineer or Architect shall be licensed accordingly. The registered Engineer or Architect shall be the direct contact person. The Architect/Engineer shall provide architectural, structural, mechanical, electrical and civil planning programming services for the construction of the homes listed above. Services required will range in scope from program interpretation in cooperation with HUD, BIA, IHS, Tribal officials and the local Authority through the completion of the pro- [illegible] factors for the [illegible] services are listed [illegible] criteria 1. [illegible] Housing [illegible] points. [illegible] points, 5. Professional/technical competence and experience...15 points, 6. [illegible] plan detailing employment and training of Indian persons...10 points, 7. Indian preferences...Up to 15 points. The local authority plans to implement the Indian Preference Procedure by the use of the procedure set forth in 24 CFR Part 905 Indian Housing: Revised Consolidation Program regulation. The particular section to followed will be 24 CFR 905.175. Indian Preference is in effect for the project with a total of 15% of the total points allocated for Indian Preference. A/E firms that claim and provide documentation of Indian Ownership will receive Indian Preference credit up to fifteen (15) points. Firms that claim Indian Preference must submit the following with their proposals to qualify for Indian preference. (A) Tribal Certification of the Indian Owner, (B) Certification that the Indian person is the controlling owner of the firm submitting the proposal, (C) A complete listing of the structure of the Indian owned firm, including the name of all persons associated with the firm and a listing of their job functions in addition to the areas of their registrations and or areas of expertise. All responding Architectural firms must submit a statement describing how they will provide Indian Preference in their sub-contract work. The successful Architectural firm will be required to comply with the Shoshone-Paiute Tribes TERO Ordinance along with any Tribal fees and licenses. The Duck Valley Housing Authority will accept proposals commencing January 17, 1994 until 4:40 PM on February 7, 1994. Proposals received after that time and date will not be considered. Proposals will remain open for 30 days. The Duck Valley Housing Authority reserves the right to reject any proposal. For more information regarding this Request for Proposal, please contact Audrey L. Howard, Contracting Officer, Duck Valley Housing Authority, P.O. Box 129, Newton Subdivision, Owyhee, NV 89832 (702) 757-3589.

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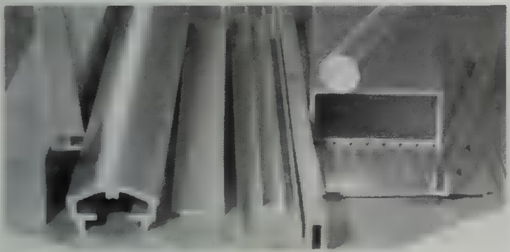

J.G. Braun Co. supplies aluminum, architectural bronze, steel, iron & brass items, including handrails & accessories, angle & channel, round, square & rectangular tubing & bars, brackets, spindles, starting posts, collars, finals, post caps, pipe railing components, rosettes & various balls, (Stamped steel ornaments in our other catalog.) For free catalogs, **(800) 323-4072.**

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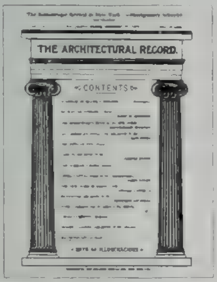

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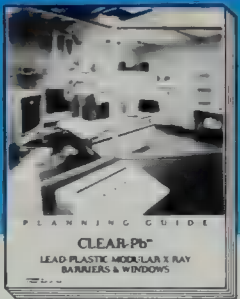

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The editors of ARCHITECTURAL RECORD announce the first annual. Computer Delineation award. Architects and designers are invited to submit entries for any type of original computer-generated drawing, rendering, or model. Entries will be judged on originality, clarity, elegance, and the extent to which the computer's unique abilities are developed. We'll accept single images or animations. A professional jury will be announced.

Prizes

1st Prize: A complete Architrion package from BAGH Technologies, a $4,500 value. 2nd Prize: Auto Architect, Windows-based architectural-design software from Softdesk. Other prizes to be announced. Winning entries will be published in the June 1994 issue of ARCHITECTURAL RECORD, and may be exhibited.

Rules

Projects delineated can be real, potential, or speculative, but they must not have been previously published in a design or computer journal as either editorial or advertising. Images prepared solely for promotional use by manufacturers are also ineligible. An entry may be prepared on any platform, using any hardware, software, or output device. There are no entry forms or fees, but entries must be in hard-copy form, except for animations, which may be submitted on VHS cassette. With your entry, include a brief description of the project of which it is a presentation, and a full description of the platform, hardware, software, and output device used. Entries must be received by March 4, 1994. Entries accompanied by a stamped, self-addressed envelope will be returned. Fax queries to 212/512-4256.

Submissions should be mailed to:
James S. Russell
COMPUTER DELINEATION AWARD
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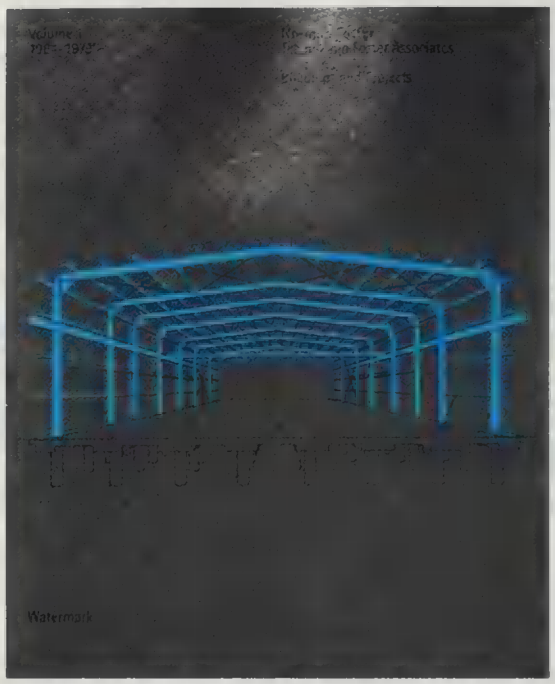
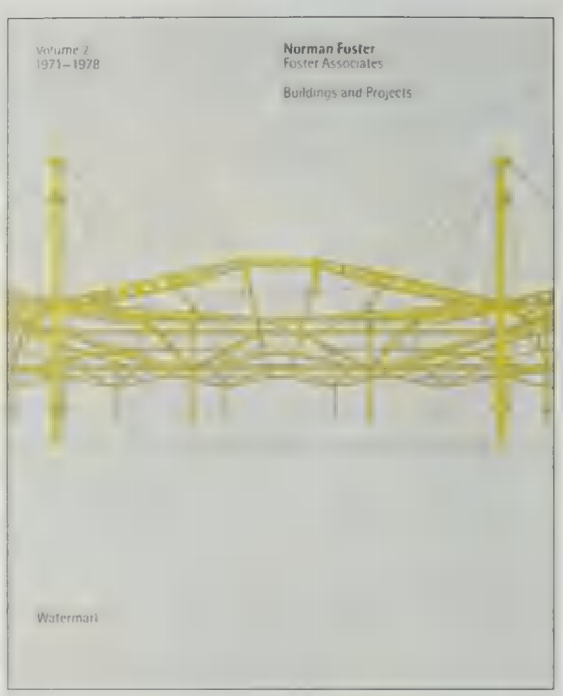
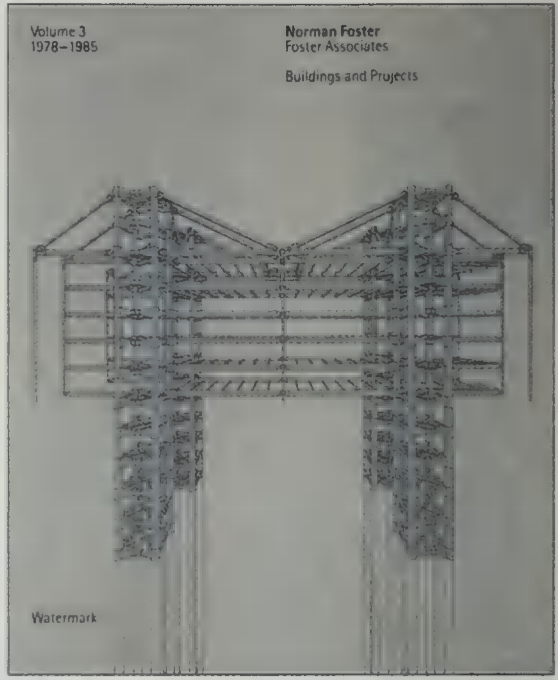
AIA Gold Medal: Special Offer







volume 1

House at Creek Vean
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Reliance Controls

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Fred Olsen Amenity Centre
Fred Olsen Passenger Terminal
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IBM Pilot Head Office
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Special Care Unit
Palmerston Special School
Factory for SAPA
Modern Art Glass
IBM Technical Park

volume 2

Willis Faber & Dumas
Gomera Regional Planning Study
Masterplan for St Helier Harbour
Sainsbury Centre for Visual Arts
Foster Residence
Frankfurt National Athletics Stadium
[illegible]

volume 3

Furniture Systems
Whitney Development
Humana Competition
Billingsgate Market Redevelopment
New Headquarters for Hongkong Bank

First published in 1989, volumes 2 and 3 of **Norman Foster**: Buildings and Projects met with immediate critical acclaim, setting a standard for architectural monographs by which similar publications have come to be judged. Published in 1991, volume 1 continued in the same tradition, completing the story and creating the definitive record of the early projects of this exceptional architect.

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RL RECORD LIGHTING
BTS Building Types Study
PR Pacific Rim

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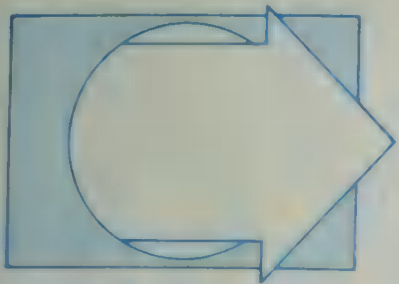

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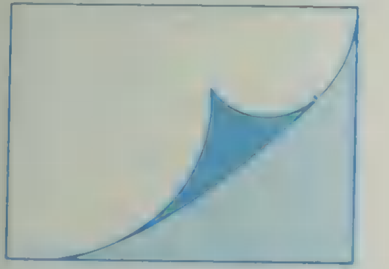

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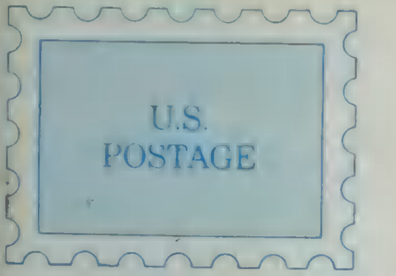

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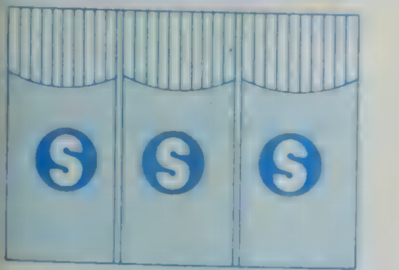

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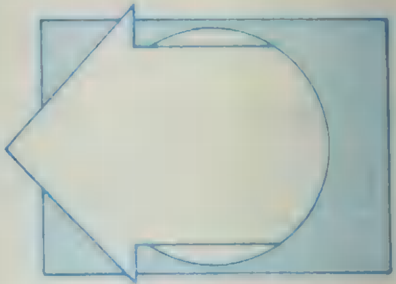

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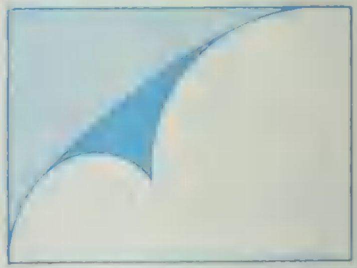

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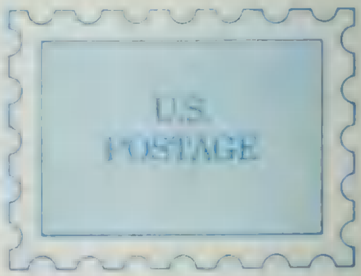

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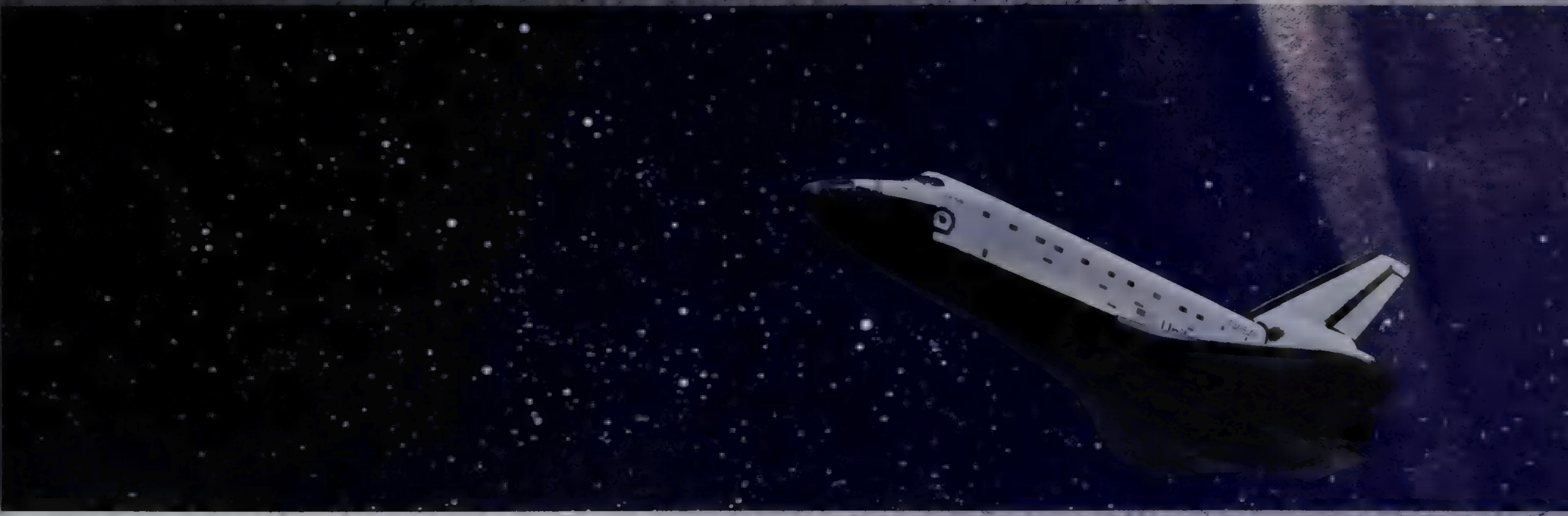

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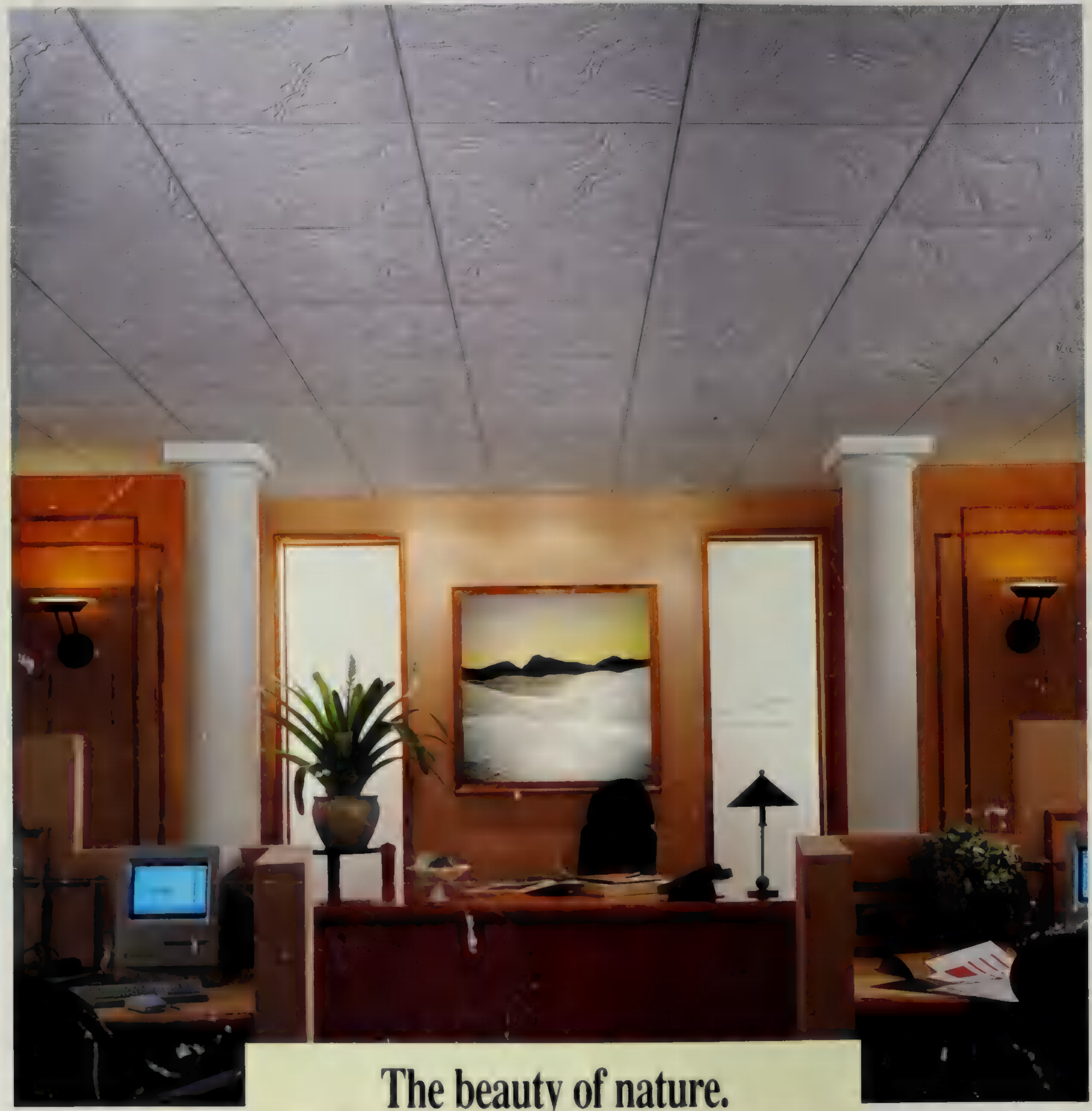

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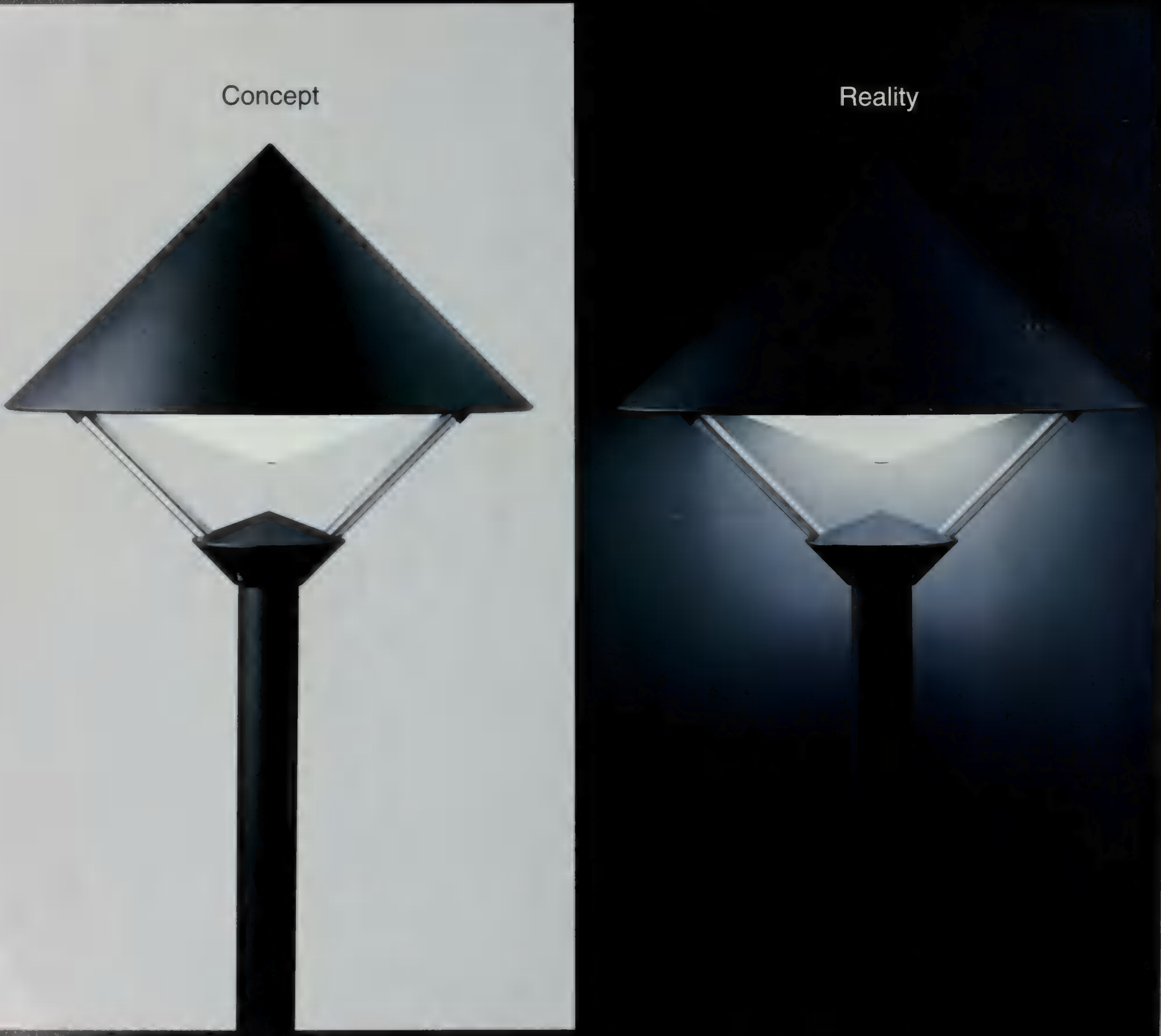

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Circle No. **80**

ARCHITECTURAL RECORD LIGHTING Supplement **February 1994**

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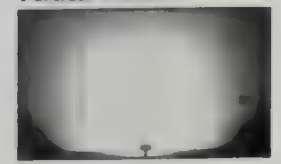
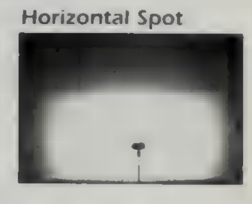


Vertical Flood



Horizontal Spot

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IALD call for entries

1994 IALD international lighting awards

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Registration Form

Please include this form with your entry.
You may copy this form for additional entries.
Entry fee: $25.00 per entry

Project name

Location

Type of project

Date of completion ☐ This project designed under special energy constraints

Contact at project

Lighting designer

Firm

Address

City State Zip code Phone

Architect (if applicable)

Firm

Address

City State Zip code Phone

Interior designer

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Kupiec

Program Description

The Lighting Awards program was established in 1983 to increase awareness of quality lighting design by recognizing lighting installations which display high aesthetic achievement backed by technical expertise, and exemplify a synthesis of the architectural and lighting design process. As a collection of work, the awarded projects illustrate the diversity of techniques used to create outstanding lighting design.

Eligibility

Anyone may submit a project. The project must be a permanent architectural lighting design solution, interior or exterior, for which construction was completed since 1 June 1991. Lighting products, lighting equipment and lighting design for theatrical performances are not eligible.

Judging

Projects will be judged individually based on aesthetic achievement and technical merit in accordance with the designer's concepts and goals. This is not a competition; there is no minimum or maximum number of awards granted.

Awards

There are two types of awards, Awards of Excellence and Citations. Award winning projects will be recognized at the IALD Awards Dinner and Presentation on May 5, 1994 in conjunction with LIGHTFAIR International in New York. Winning projects will be published in leading architectural and design publications and included in the IALD slide library.

Submission Requirements

All submissions must be in an 8 1/2" x 11" format.
Please include all of the following:

Slides: A maximum of ten (10) 35mm slides of the project. Originals or high quality duplicates are required. The quality of the photography is important in the judging process. Professional photography is advisable. If plans and drawings are required to describe the lighting solution, we recommend photographing essential information and including them as slides. All slides should be labeled with project and firm name. With slides positioned right-reading, number each slide in the upper right corner. Photographs, drawings and/or magazine articles will not be considered.

Written Statement: A one page summary written on blank paper, no letterhead. Include a description of the architectural and lighting design concept, design criteria, special energy constraints and the design solution. The summary should incorporate the visual presentation and be keyed to each slide.

A self-addressed stamped envelope: For the return mailing of your submission. Foreign submissions should include a self-addressed Express Mail form. If you do not wish your submission to be returned, please indicate so in writing and include with submission.

Completed registration form.

Entry Fee: Payment is by check or money order only. Checks must be payable in United States currency and drawn on a U.S. bank. Make payable to, IALD. A single check may be written for multiple entries. Please do not send cash.

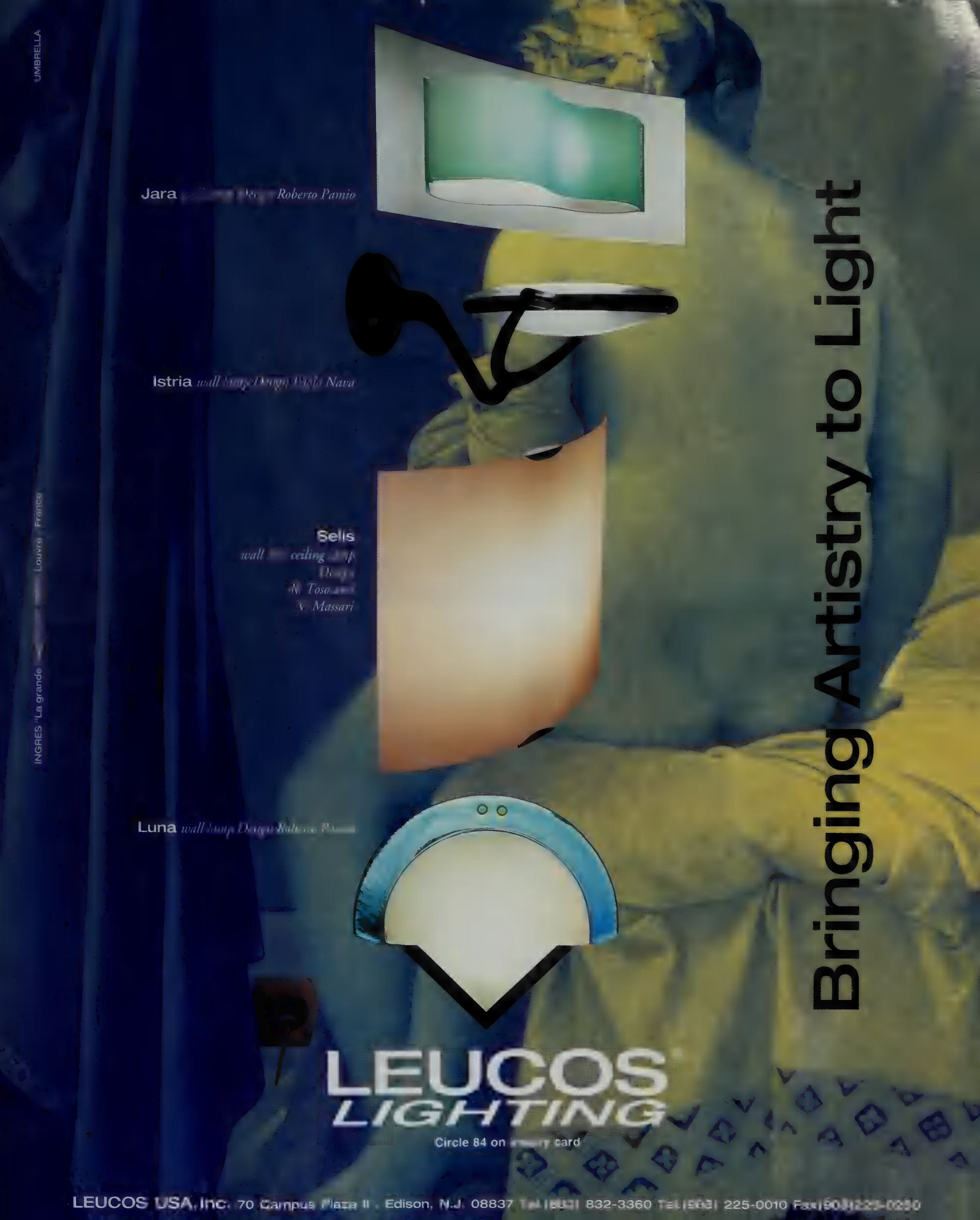
Address entries to:

IALD Awards Program
18 East 16 Street, Suite 208
New York, NY 10003-3193 USA
Tel. 212/ 206 1281 Fax. 212/ 206 1327

Deadline

Submission must be received no later than **Tuesday, 1 March 1994.**

The IALD Lighting Awards Program is co-sponsored by Interiors Magazine.



Jara *wall lamp Design Roberto Pamio*

Istria *wall lamp Design Paolo Nava*

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wall and ceiling lamp
Design
R. Toso and
N. Massari

Luna *wall lamp Design Roberto Pamio*

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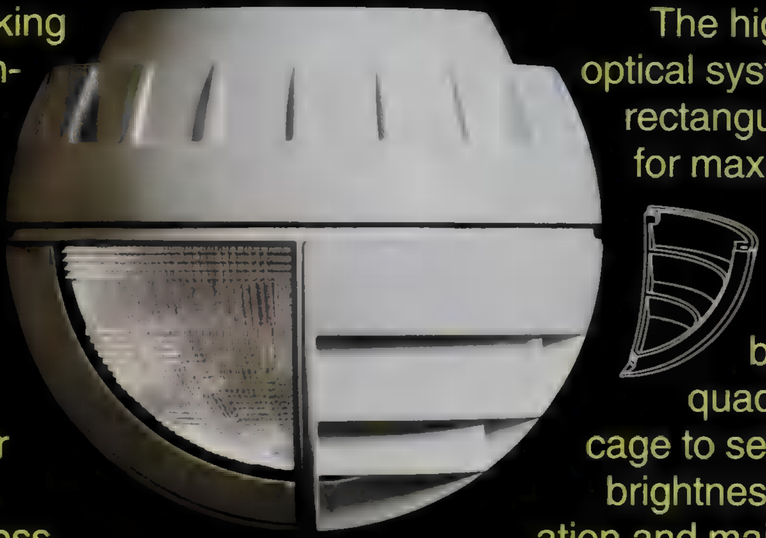

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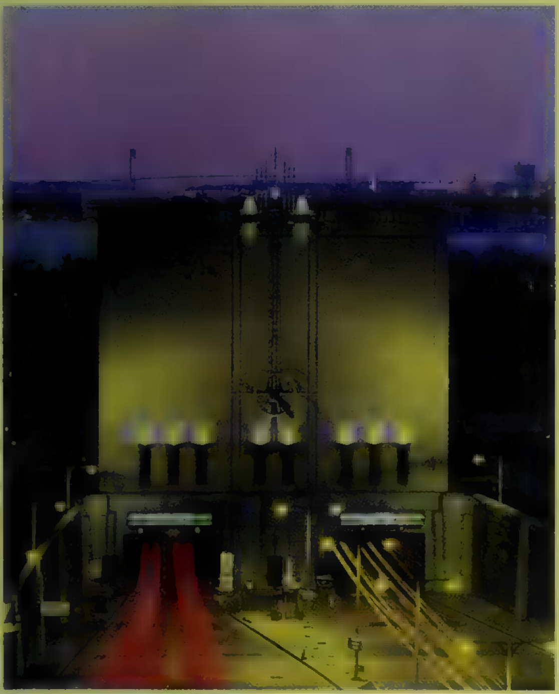
New York City

The Glamour Route to Brooklyn

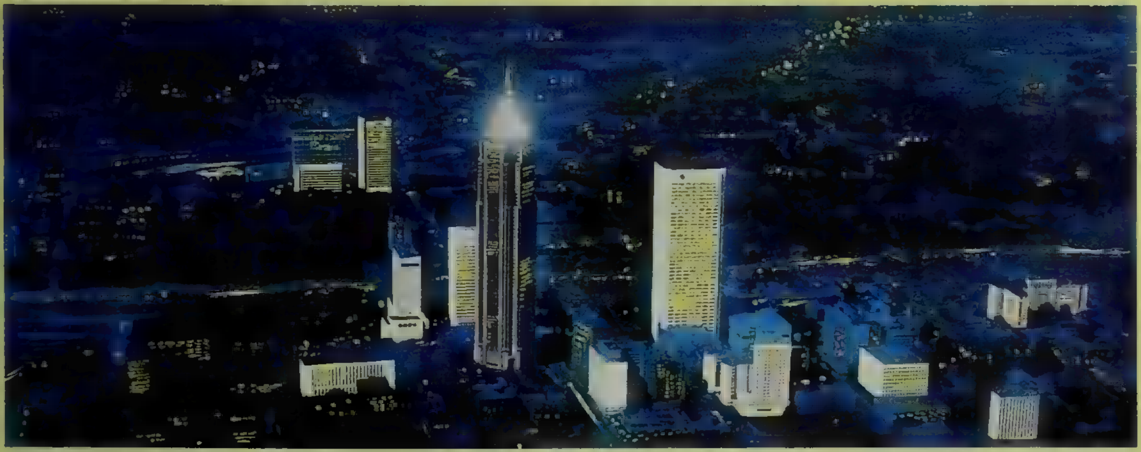


© Paul Warchol photo

A large sculptural work by R. M. Fischer, combining one of the city's largest clocks with an overall lighting treatment, turns the Robert Moses-era ventilation shaft at the entry to the Brooklyn-Battery Tunnel into a glamorous exit from Manhattan for commuters. High-intensity white metal halides installed above the existing windows give them the image of monumental sconces, and at the same time back-light and silhouette the clock against the wash of high-pressure sodium thrown by existing adjacent street lamps. The finial is a streamlined grillwork crown with a high-pressure sodium centerpiece and flanking torchières—their top sections perforated stainless sheet and bottom sections stainless wire cages—containing metal-halide lamps. The result, says Fischer, turns the entire building into sculpture. ■

Atlanta

Carrying the Torch from Super Bowl '94 To Olympics '96



Super Bowl '94 saw the kick-off of a lighting master plan, designed by Douglas Leigh, to have this city aglow by the 1996 Olympics. Computer renderings superimposing possible schemes on night-time photos (midtown in the North Avenue area, shown above) are being used to promote the program, which has the blessings of the local police and EPA. So far, GE Lighting has donated over $1 million in goods and services. For information on an upcoming GE lighting competition for Atlanta, fax Duncan Elliot at 404/523-3483. ■

Lighting Design

Briefs

Lightfair International
Making a bow at 1994 Lightfair International, May 4-6 at New York's Jacob Javits Convention Center, are three specialized pavilions for decorative lighting, international lighting, and lighting components and accessories. ARCHITECTURAL RECORD LIGHTING will sponsor a design seminar. Litecontrol has scheduled a 6:00 a.m. Fun Run on May 5 to benefit the Nuckolls Fund's educational grants.

Publications
Full-text IESNA lighting standards are available on CD-ROM, along with a comprehensive Worldwide Standards Service Index. IESNA has also published the 64-page "Office Lighting," a complete update of the 1982 edition that includes consideration of workers' psychological well-being and comfort, and end-users' responsibilities. List price is $28, and $18 to members. Contact Beth Bay, IESNA, 120 Wall Street, New York, N. Y. 10005-4001.

New Owners

- Cooper Lighting has acquired Fail-Safe Lighting Systems, a Chicago manufacturer of fixtures for the confinement, clean-room and high-abuse markets.
- JJI Lighting Group has established Architectural Landscape Lighting, Inc., in Santa Ana, California, to manufacture architectural outdoor lighting fixtures.

Retrofits

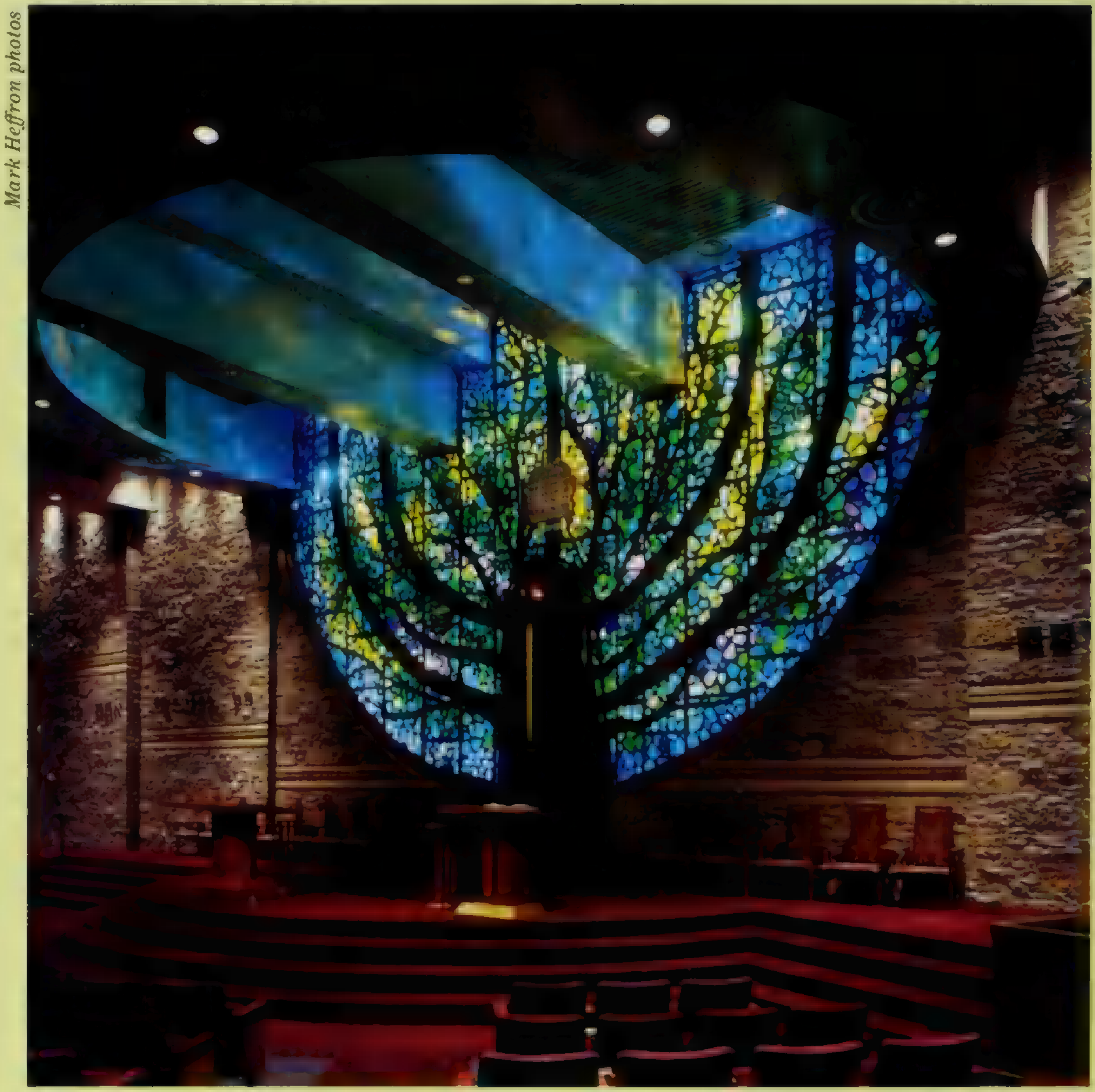
- Parke Industries has designed and installed energy-efficient interior and exterior lighting systems in a fast-track retrofit of more than 70—or roughly 85 percent—of Southern California Gas Company office locations. Benefits include an estimated $406,000 savings per year, plus $110,000 in utility rebates on the project.
- Electronic Ballast Technology is in the last phase of a three-year program to retrofit all 700 of Sears giant stores. Energy savings up to 35 percent are expected.

Remembered
W. Wallace Lozier, 87, a physicist who won an Academy Award for the lights that made color film possible, died in October. ■

Wisconsin

Tree of Life a Brilliant Beacon at Day or Evening Services

Mark Heffron photos



While the building committee at Temple Shalom in Fox Point debated whether to floodlight the stained glass Tree of Life behind the Bimah (or altar) or to create an enclosed light box behind it, Steven L. Klein, lighting designer at Standard Electric, a Milwaukee commercial supply house, counterproposed a light well open to daylight, with a take-off on Ingo Mauer's Ya Ya Ho to fire up the colors for evening services. Five pairs of electrified, tensioned aircraft cables, carrying 80 individually aimed constant-color MR16 floods, span the 40-ft well without casting daytime shadows. Four 175W metal halides in horizontal floor fixtures bounce light off the rear of the well to illuminate the lower third of the window. Concealed 75W PAR30 narrow beams graze the textured interior masonry to create a Wailing-Wall effect. ■

Utah

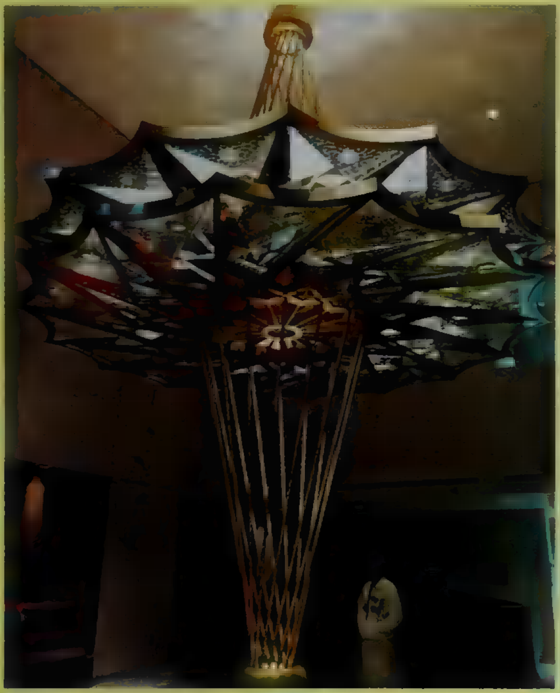
Creating Barroom Sizzle In One of the Dryer States

Since state law bans the display of liquor bottles, the Baci Restaurant in Salt Lake City uses stained glass windows to create glitter and pattern behind the bar. From the lounge (not shown), the gleam of neon signage and A lamps in the column capitals shines through the cut and fractured glass into the restaurant bar. A huge window-mounted sandblasted glass clock—a plus in the theater district—backlit with no more than four MR16s, reflectorless to take advantage of red and green beams, draws diners' attention to mezzanine tables. ■

© Douglas Kahn photos

Michigan

Kaleidoscopic Bath of Colored Light Calms Hospital Visitors

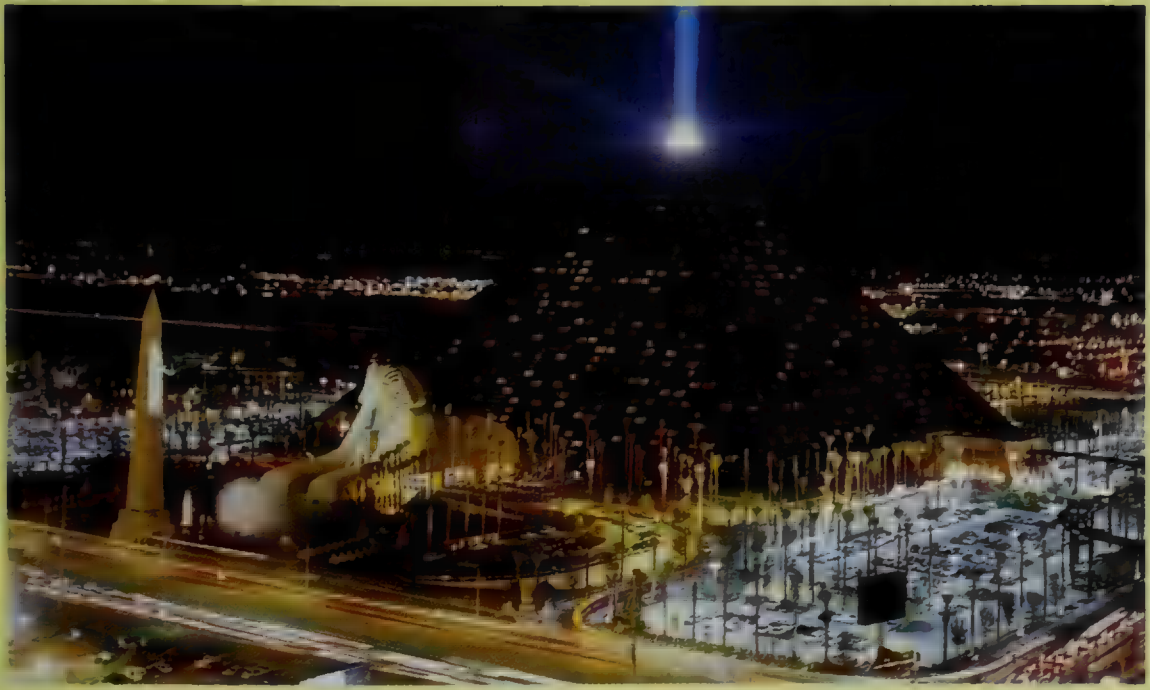


Part of an ongoing series of installations by Eric and Deborah Staller to provide a contemplative, healing atmosphere for Butterworth Hospital in Grand Rapids, "Angelvision" attempts to relieve visitors of their typical lobby pacing and hand-wringing. The 18-ft-diameter, two-story-high sculpture is comprised of two independent segments—one ceiling-hung, the other floor-mounted—each consisting of 224 stained-glass panels, slowly rotating counter to each other. Paul Marantz of Fisher, Marantz, Renfro, Stone used narrow-beam, low-voltage PARs in the top and bottom "knuckles" to create a kaleidoscopic bath of light, and tungsten halogen uplights built into the top of the upper wheel to make an ambient lighting plane of the ceiling. The Stallers describe their work at the hospital as creating "something of a spiritual theme park." ■

Nevada

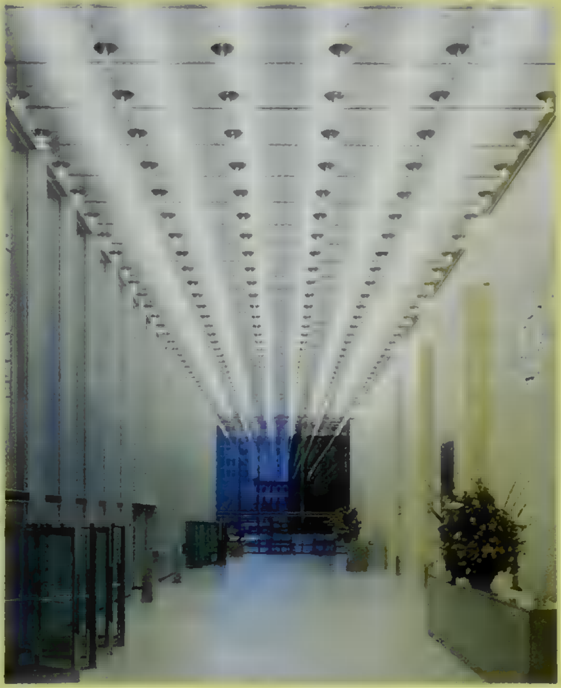
36-Billion Candle-Power Pyramid Captures Las Vegas Sky

A continual 20-minute light show designed by Zach Taylor of G-Force to erupt into the Las Vegas sky and be seen from the California border is a form of vertical advertising for the Luxor hotel. The scheme involves 30 seconds of strobing from the apex of the pyramid-shaped hotel, 18 minutes of white brilliance from 45 7,000W xenon lamps, followed by two minutes of golden glow as the lamp elements cool. Lighting for the computer-cued sphinx and the adjacent "camel lot" was handled by John Renton Young. ■



New York City

Lobby Banks on a Bright Ceiling

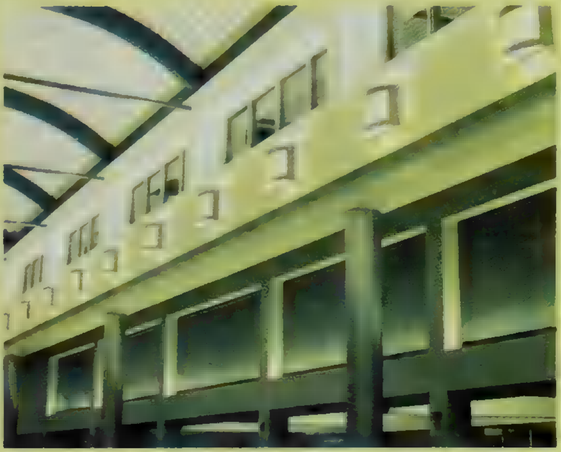


James D'Addio photo

To grab pedestrian attention for the podium-mounted lobby at One Chase Manhattan Plaza, Fisher, Marantz, Renfro, Stone used 100W constant-color high-pressure sodium lamps on a polished chrome lattice to animate the lobby-length aluminum-leaf ceiling. ■

New Orleans

Airport Luminaires Do Double Duty



Craig Macaluso photo

For the modernized New Orleans International Airport Terminal, Cosentini Associates specified custom luminaires containing metal halide uplights to illuminate the vault, and compact fluorescents to light the perforated metal shields. ■

Family Resemblance

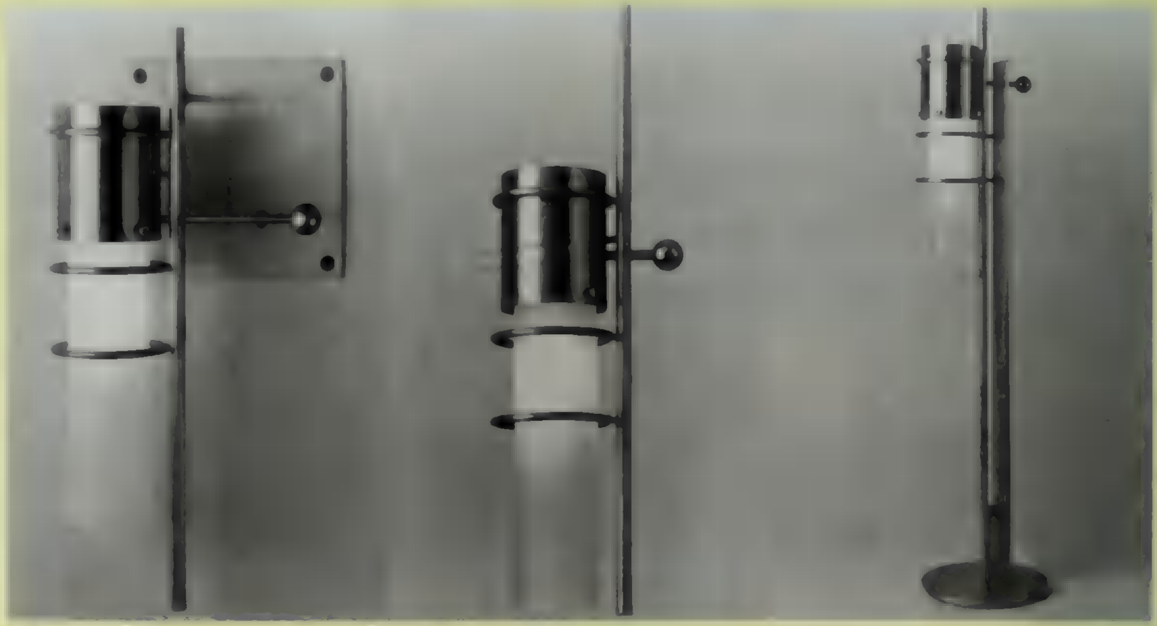
311. Multiple choice

A manufacturer of luxury mirrored cabinets has introduced a novel bath light, which incorporates both incandescent and fluorescent illumination behind a white polycarbonate diffuser. The vertical fixtures hold three compact-fluorescent (2700K) and two incandescent lamps, which can be lit individually or simultaneously to simulate various lighting environments for makeup application or shaving. Currently marketed only as a lighting option with Robern cabinets, the 1 1/2-in.-deep fixture comes in 30- and 40-in. lengths. Fixtures are UL-listed for damp-location and recess mounting. Robern, Inc., Bensalem, Pa.

311

312. Specifically stainless

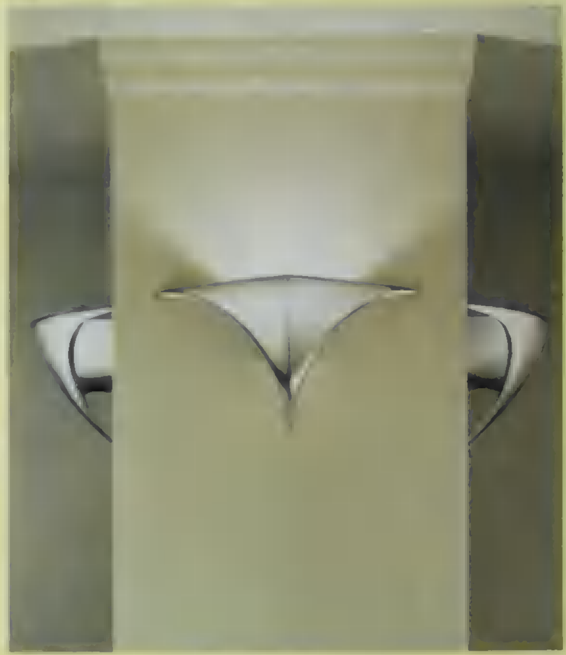
Iranian-born architects (and sisters) Gisue and Mojgan Hariri created the Stasis pendant for the relatively large space and industrial ambiance of a SoHo loft. Subsequent coverage of the project in design magazines generated demand for sconce and table-lamp versions with the same stainless-steel bolts and fittings. Luminaires range in height from the 14-in. sconce to a 75-in.-tall three-lamp floor model (not shown); light comes from 60W T10s placed within sandblasted-glass tubes. George Kovacs Lighting, Inc., Glendale, N. Y.



312

313. Vive la différence

California-based Boyd, a source of custom-design lighting since 1921, continues to use a handcraft-oriented production process while making standardized, "cataloged" fixtures for commercial, residential, and hospitality applications. President Jay Sweet, grandson of the founder, describes the company's designs as incorporating an "American Aesthetic," one that is based in both cultural and functional diversity. Erik Chan has won several product-design awards for his sand-cast sconce (313a). Shown in polished aluminum, it also comes in cast brass or bronze. Jean Mason hangs her elegant Paladin chandelier from a single length of tasseled metallic rope; the etched-glass bowl measures about 21 in. across (313b). Boyd Lighting Co., San Francisco.



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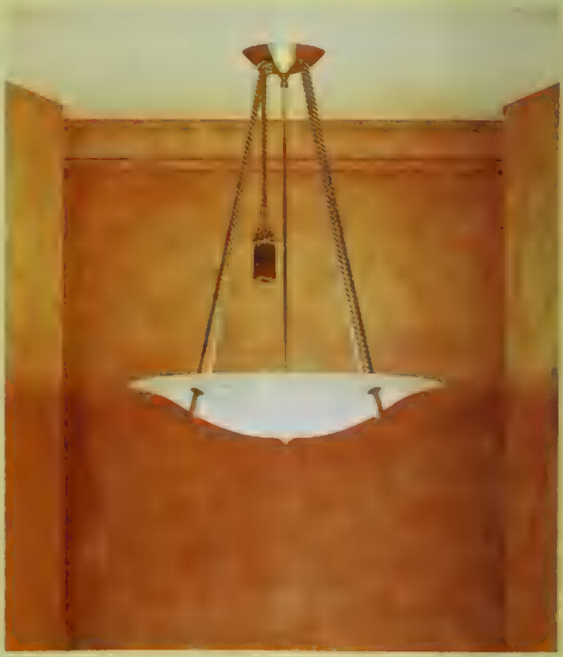

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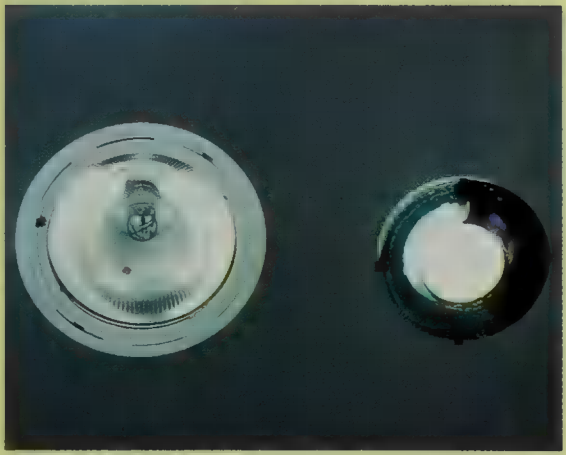
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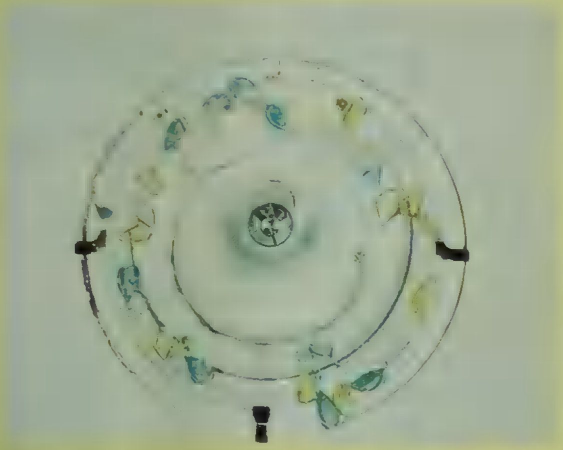
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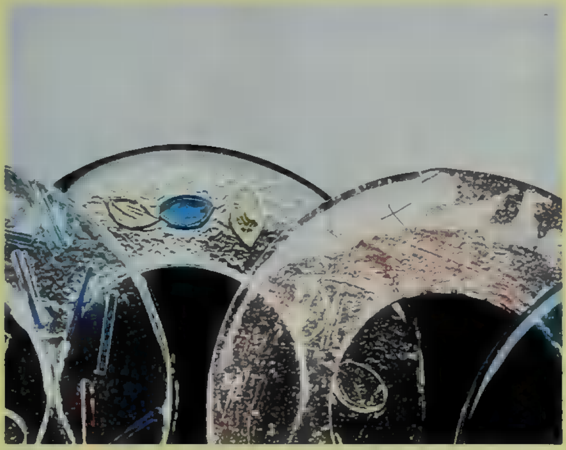
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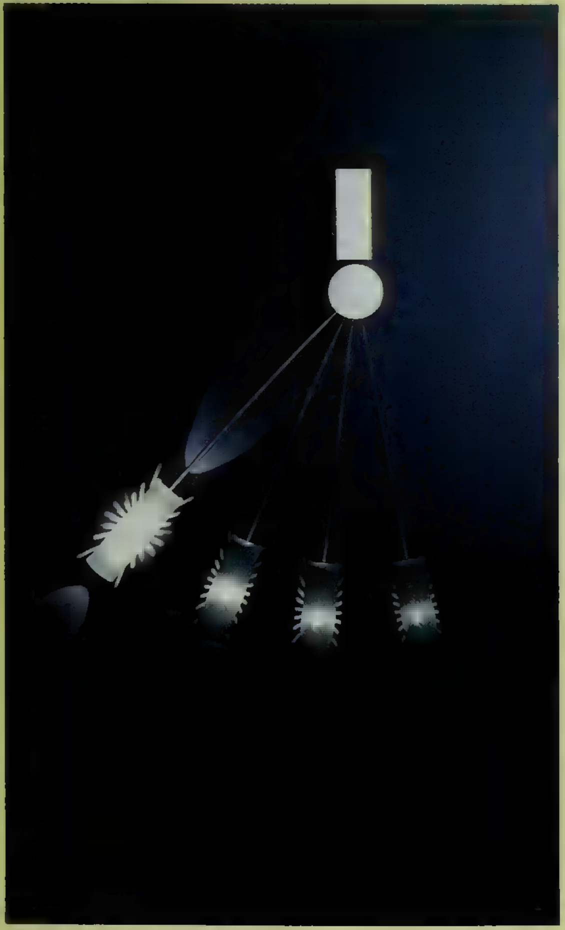
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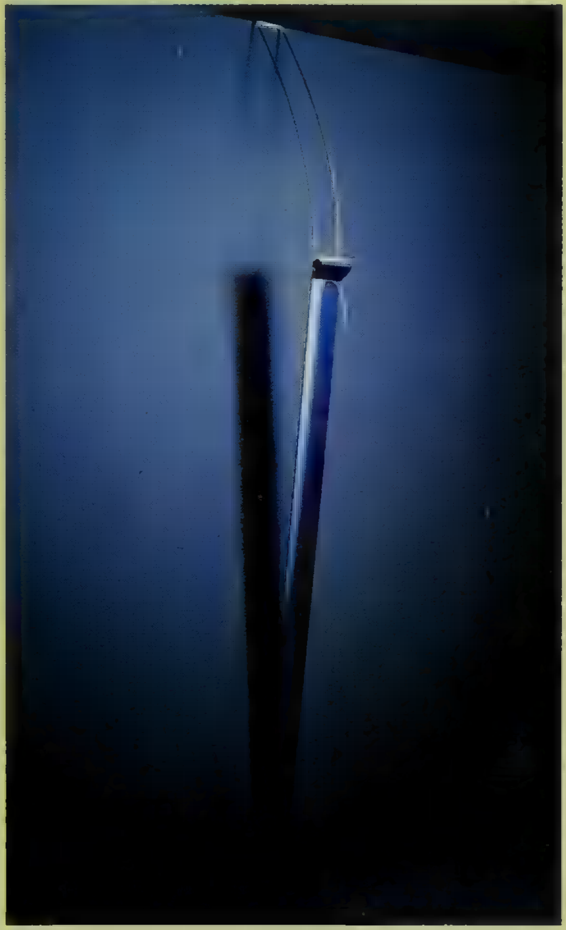
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314. Related downlights

A completely new recessed downlight designed by Fabio Reggiani, the Super Techne purports to address several lighting problems at once: glare; energy efficiency; long-term fixture maintenance; and the ceiling discrepancies common in retrofit installations. A faceted, metallized-polycarbonate reflector is said to direct light from CFL sources efficiently, with visual comfort and no iridescence; a clear, protective coating minimizes fingerprinting (314a). Housings are shallow, from 3 5/8 to 8 in.; a mechanical fixture-retention device allows each of the two clips to adjust independently to different ceiling thicknesses. There are several aperture sizes for compact-fluorescent sources from 5W to double 26Ws.

Optional Murano-glass discs (314b, c, d) add a decorative element for what is described as a modest upcharge. These come in three diameters and the four patterns pictured. Fixture finishes are in standard white, graphite, or black powder paint. Reggiani USA, New York City.

315. Adaptable Italians

Two wall lights, both designed by Gianluigi Arnaldi and Luigi Gaetani and made by Status, offer unusual positioning flexibility. LiLi, at left, looks like a clock pendulum, and has the same range of motion. Friction bearings hold the lighting body in any desired position along its arch. Materials are aluminum and plastic; the shade is sandblasted glass in white, pink, or blue. Lamping is a 100W halogen, maximum.

Clip, near left, is held in place against a wall by arced tension bars that can adjust to fit ceiling heights of over 10 ft. The fixture itself takes a 250W halogen bulb set in a swivel socket. Fittings come in a metallic midnight blue, gray, or black, and a pearly white. D Plus, Inc., Los Angeles.

Lighting Systems for the Electronic Office

By James R. Benya

Everyone in the 1970s knew that one day all office workers would have computers. But no one ever predicted the profound impact these little plastic boxes and screens would have on modern office lighting. The evolving technologies of the office computer screen caused a similar revolution in office-lighting-design practice. That's because computer screens and lighting are so closely tied to productivity. It quickly became obvious that money and morale were also strongly affected.

The basics

The lighting designer should first reevaluate the basic lighting-design criteria. With computers, a task/ambient design solution is almost always preferable to general illumination alone. Significantly fewer problems occur when general or "ambient" illumination is around 30 fc. Localized task lighting between 50 and 75 fc can then provide illumination only when necessary. If only ambient illumination must be used, then lifting average levels to 50 fc is prudent in computer work spaces. Second, the lighting design must include all windows, skylights, and their control methods, such as shades or curtains. Windows and skylights are almost always brighter than any light fixture and are always a serious design problem for computer workspace. Appropriate brightness controls—drapes or blinds—must be added to most fenestration.

Third, the location and orientation of video display screens should be influenced by the lighting designer. For example, screens should be turned away from windows and skylights, even those with acceptable brightness control. Also, screens should be maintained in the vertical plane to minimize reflections of the ceiling and luminaires. Avoid screens in or near the horizontal plane, such as the glass-covered types built into executives' desks.

Next, the interior finishes should be fairly neutral, without extremely light or dark colors—except for accents—when trying to design lighting for computer spaces, too often the lighting designer has to overcome problems caused by interior-design choices. Finishes that are too light (such as white and off-whites) reflect light too readily, causing potential problems with extreme surface brightness and the resulting reflections in screens. Dark surfaces require more light to bring brightnesses into balance in the rooms, and require more energy. Light pastels and neutrals are strongly preferred for work surfaces to minimize contrast between surface and paper. Finally, the designer can select from among four principal design approaches. Each is different; no one system is absolutely the best.

Direct general illumination

The least-expensive approach to lighting offices uses standard 2- by 4-, 2- by 2-, and 1- by-4-ft recessed troffers. Flat prismatic plastic lenses are the most popular shielding medium, next to 3-in. deep, large-cell parabolic louvers. In general, neither ordinary prismatic lenses nor parabolics are particularly suited to VDT-intensive spaces. But unless the computer screens happen to reflect one or more of the luminaires' images, they can work well. If the general illumination level is around 50 fc average, most smaller offices can utilize just about any direct lighting system as long as the VDTs don't reflect luminaire or window images. Reflections from other objects, such as operator clothing or vertical surfaces in the room, can become problems at higher lighting levels.

Real problems occur when VDTs are in open spaces where each screen can reflect a multitude of luminaire images. Here, special shielding must be used. Lensed luminaires should be equipped with special "computer friendly" lenses or retrofitted with parabolic-shaped, metalized small-cell louvers, often called "eggcrate" or "paracube" louvers. Parabolic troffers should be of the special VDT-type. Narrow, continuous-row parabolic troffers are another option for new spaces. However, for any direct luminaire with sharp cutoff, it is important to limit the luminaire's brightness within the cone of light, or uncomfortable glare will result. For example, in a 2- by 2-ft luminaire two F40 or F031 U-lamps are the practical limit for ceilings up to 10 ft; three-lamp fixtures, especially with biaxial lamps, are simply too bright.

Indirect general illumination

For visual comfort, indirect lighting is almost always superior to direct illumination. Most human-factors experts favor indirect lighting for VDT workspaces. A well-designed indirect lighting system produces extremely uniform ceiling-plane illumination, and adds a hint of fixture brightness to identify the source location. Older, low-tech indirect systems don't work especially well, but extremely effective products were developed in the mid- to-late 1980s. Critics of indirect lighting often focus on cost. Until recently, in order to produce a smooth, continuous run of metal, manufacturers had to use heavy-gauge extruded aluminum. But new products using sheet aluminum and high-tech steel processing have permitted several new designs with much lower price tags. The need for higher ceilings has been resolved with efficient widespread-optics. Indirect lighting is now a reasonable alternative for ceilings as low as 8 ft, 6 in. But indirect lighting is not perfect, either. For starters, indirect lighting requires more watts for each footcandle that reaches the task than direct lighting. And workers complain of an "overcast" feel to the workspace. If the work-surface illumination provided by indirect lighting must be higher than 30 to 40 fc, the ceiling may become too bright, and despite indirect lighting's soft quality, objects will become visibly reflected in screens.

Direct/indirect general illumination

A logical and obvious resolution of the problems of both direct and indirect lighting is to combine the two: the comfort of indirect lighting with the efficiency and visual interest of direct lighting. In fact, some of the most sophisticated VDT lighting systems, originally designed in Europe to meet the tough older DIN standards, are direct/indirect systems. The indirect portion can be as little as 50 percent or as high as about 65 percent of the direct portion shielded.

The designer can choose among many products, most over 80 percent efficient and designed to use T8 lamps. The most sophisticated designs use diffuser side panels to allow a slight glow to the side of the luminaire; in theory, the luminaire achieves the same luminance as the ceiling, so the reflected image cannot be seen in a VDT screen. All this

James R. Benya is director of lighting and daylighting for Proven Alternatives, Inc., San Francisco.

Lighting design for the electronic office has flourished for one reason: productivity and worker morale are easy to translate into dollars.

sophistication comes at a price: direct/indirect general illumination arguably works the best and also costs the most.

Task/ambient illumination

Developed during the open-office panel-furniture systems craze of the mid-1970s, task/ambient lighting uses uniformly-distributed, low-level illumination for ambient purposes and higher task-lighting levels delivered by a separate lighting system. The ambient system usually provides 20 to 30 fc and the task lighting system provides 50 to 75 fc. Many architects and designers confuse indirect lighting with ambient lighting because the furniture systems invariably utilized indirect lighting for the ambient system, and direct lighting for the task. In fact, the ambient lighting component can be provided by one of several systems, including direct illumination from ceiling troffers.

Each design approach has its advantages and disadvantages. As always, the designer has to weigh the issues and decide which is best.

Theoretically, a furniture system is a perfect ambient lighting system alternative. But practical problems may prevent this. At 60 to 68 in., most panel systems are two low. Switching, wiring, and service caused problems by using 120V power because 277V is not typically available from the floor; panel-mounted lighting requires more costly finishes and detailing. In particular, the low mounting height requires luminaires to have narrow beam spreads and lens coverings, thus restricting their efficiency and causing potentially major uniformity problems. Nevertheless, some of the most ideal workspaces for open-office furniture employ complete task-and-ambient systems with the uplight built into the furniture.

Special design considerations

VDT workspace design requires calls for solving a few particularly demanding problems:

Supplemental Lighting. Designers should add supplemental-illumination lighting systems to complete the design. Interior and core walls should be brightened using wall slots or wallwashing. These additions will minimize or eliminate "parabolic gloom," the cave-like feeling caused by sharp cutoff lighting, as well as helping alleviate the "cloudy day" feeling of indirect lighting.

Task Lights. Don't try too hard. Sophisticated asymmetric task lights developed in the 1970s threw light across the task surface, but a classic table lamp equipped with a state-of-the-art compact-fluorescent lamp might work as well. It depends on where it goes and how it's used.

CADD Spaces. Direct illumination is especially suited for intense high resolution VDT work, such as CADD, air traffic control, and similar situations. In this type of work, very dark ceilings and upper walls are essential to keep screens glare-free. In these work areas, consider radical designs such as low-voltage pinspot lighting for the paper task and other task areas, and providing NO ambient illumination on screens.

Dimming. Designers have always used dimming to give individuals more control over their lighting environment. In the new age of dimmable electronic ballasts, allowing the general illumination system level to be set by users is a big asset to any sensible lighting design. If cost matters, two-level electronic ballasts may be a good fallback position.

HID lighting systems

Promoted heavily in the 1970s, HID ambient lighting systems continue to be an alternative to fluorescent. But unless you're designing a space with ceilings over 14 ft high, it's probably best to stick with fluorescent. The modern fluorescent source has higher efficacy, greater luminaire efficiency, much less flicker, longer lamp life, better lamp starting, and far superior color quality compared to any HID source. HID lamps, and in particular metal halide, only make sense when 400W (or greater) lamps are used in multi-worker ambient-illumination systems in spaces with unusually high ceilings. Because of their poor color-rendering qualities, high-pressure sodium sources are best avoided.

Use common sense

It is a shame that designers sometimes use published technical fixture criteria in a misguided way. Use your eyes and common sense, and listen to your clients and workers. Some parabolic troffers that met IESNA's old standard RP-24, for example, were inferior to standard prismatic lensed troffers in smaller private offices where the screen couldn't "see" the luminaires. Learn to counterbalance bright windows with greater core-wall luminance, not footcandles. And above all, learn to recognize a good work environment.

The human element

No matter how hard we try, lighting still isn't a productivity problem cure-all. I once consulted for a multi-city law firm which sought to provide the "perfect" worker environment for its high-volume, three-shift word-processing department. Two test cases were created: one in which the workers had a "perfect" VDT environment sans windows, and one in which the workers had a mediocre lighting and ergonomic environment, but an awesome upper-story highrise view. Although two of the workstations in the "view" environment did suffer from reconstruction—cardboard huts or umbrellas were built over monitors—managment concluded employee morale and productivity were far better in this room with a view.

When all things are made equal, good lighting can make a sizable difference to the bottom line. But it is a waste of money to put sophisticated lighting systems in environments where other factors truly determine the the final outcome: productivity, accuracy, endurance, and the boredom threshold of the doer. Like all else in design, the design professional must weigh the issues and make the best decision for the client, and any number of solutions may be reasonable in a given circumstance. ■

UV from Electric Light: Hazardous to Your Health?

Many worry about the amount of UV produced by efficient sources like compact fluorescent. Used wisely, they aren't as bad as once thought.

by Lindsay Audin

Indoors or out, we are almost always exposed to some source of ultraviolet radiation. We know that the sun's UV rays deteriorate materials, and cause sunburn and certain types of skin cancer. But how about electric light sources? These emit much lower levels of UV than the sun, but just how dangerous are they? Do they affect health? How much do they damage light-sensitive objects like artwork?

When selecting energy-efficient lighting products for use in our energy management program at Columbia University, (and while checking out vendors' claims), we have attempted to answer these questions for ourselves. Although our findings are not the result of strictly-controlled laboratory tests, our conclusions may help designers also struggling with these issues.

ABCs of UV

Light is electromagnetic radiation between the 380 and 770 nanometer (nm) wavelengths, and UV is between 200 and 380 nm. Every light source produces some UV. It's a by-product in incandescents, and is purposely created in fluorescent lamps to make the phosphors produce light.

UV can be described in three ways. The first is by its intensity or concentration, such as microwatts per square centimeter (μW/cm^2). The second is microwatts per lumen (μW/lm), which shows how much UV exists per unit of light. A third way of describing UV is by its location on the wavelength band. UV-A is 315 to 380 nm, UV-B is 280 to 315 nm, and UV-C is 200 to 280 nm. UV in sunlight can be 1000 times stronger than typical indoor lighting, but the atmosphere screens out wavelengths shorter than 290 nm.

Exposure standards

Health standards are based on the damage potential of the most potent wavelengths—between 270 and 290 nm. Lamps emit a mix of potent wavelengths, so finding the impact means multiplying each wavelength's intensity by a factor that adjusts for its damage potential. This varies as a factor of 10,000 as wavelengths get shorter. The result is the "equivalent irradiance" in μW/cm^2 of an equal amount of UV at 270 nm.

Exposure to 270 nm at .1 μW/cm for 8 hours may cause (in sensitive individuals) a slight reddening of the skin, which disappears overnight. This exposure is considered safe by the National Institute of Occupational Safety and Health (NIOSH). Most people require exposures 2 to 10 times this to experience slight sunburn.

Halogen lamps produce both high UV and visible light levels in the center of their beams,. but the concentration of UV in μW/lm is not much higher than other incandescents. Once again, filters can minimize any hazard. Many halogen lamps are now made with glass covers, to contain the halogen capsule, should it burst. These covers may reduce UV emissions to acceptable levels. Infrared-halogen lamps reduce UV-B and UV-C by 98 percent, while UV-A is reduced 50 to 60 percent, relative to a standard halogen lamp of equivalent light output.

High-output (HO) and very high output (VHO/SHO) fluorescent lamps emit high short wavelength UV-B, the most biologically damaging. Used in industrial fixtures lacking a lens they emit an equivalent irradiance of .23 μW/cm^2 at 100 fc—over double the level considered acceptable by health experts. The probability that a person with sensitive skin would develop basal or squamous skin cancer (the less harmful types) could increase 20 percent from eight hours daily exposure at this level. However, a standard K-12 acrylic lens reduced UV from the VHO lamp by 50 percent. UV lamp sleeves have an even greater effect.

Earlier high CRI T12 lamps have equivalent UV-B irradiances slightly above .1 μW/cm^2 at 100 fc for eight hours, but T8 and most T12 lamps have equivalent irradiances slightly below .1 μW/cm^2 at 100 fc for 8 hours, even when operated in open fixtures at the same light output.

Some say UV from so-called "full-spectrum lamps" helps the body produce vitamin D in skin, as occurs with sunlight. But the level emitted from such lamps needed for this reaction is so low in the bandwidth (290 to 315 nm) it would have little effect on clothed people in normal indoor light levels.

A bare metal-halide lamp also emits high UV-A and UV-B levels, but an acrylic or tempered UV glass lens can reduce this hazard as well. High-pressure sodium lamps yielded very low UV emissions even without a lens, due to their different mechanism for producing light.

UV and sensitive materials

Museums and art galleries use a standard based on UV from a typical incandescent lamp. Designed to limit damage to artifacts, it allows up to 75 μW/lm, no matter if the UV is of the A-, B-, or C- types.

Articles in the preservation press show some compact-fluorescent lamps (CFLs) emitting four times more UV on a UV per lumen basis than an incandescent source. Hence, some curators have been reluctant to replace incandescent lamps with CFLs. Our own test measurements have shown this conclusion to be often wrong. A commonly-used UV meter is responsible for most of the faulty results. This meter "sees" some *visible* violet-blue light as UV, thus skewing the readings against any source rich in those colors, such as fluorescent and metal halide. It also sees some infrared radiation, i.e. heat, as visible light, and so favors incandescents.

UV Protection

Taking measurements with a more accurate meter yielded better results for bare-lamp CFLs—between 50 and 140 μW/lm, while several incandescents exceeded 100 μW/lm. Screw-in retrofit fixtures with acrylic lenses emitted about 13 uW/lm; adding a UV filter cut emissions to less than 2 μW/lm.

UV filters

We've found that most UV filters work well, often cutting UV by over 95 percent. But some types also blocked a portion of the visible light. A standard acrylic lens was almost as good, reducing UV emissions from a T8 lamp by 80 to 90 percent, with little loss in light output. UV-abating films and tubing performed even better, although some

Continued on page 42

Lindsay Audin is manager of energy conservation at Columbia University.

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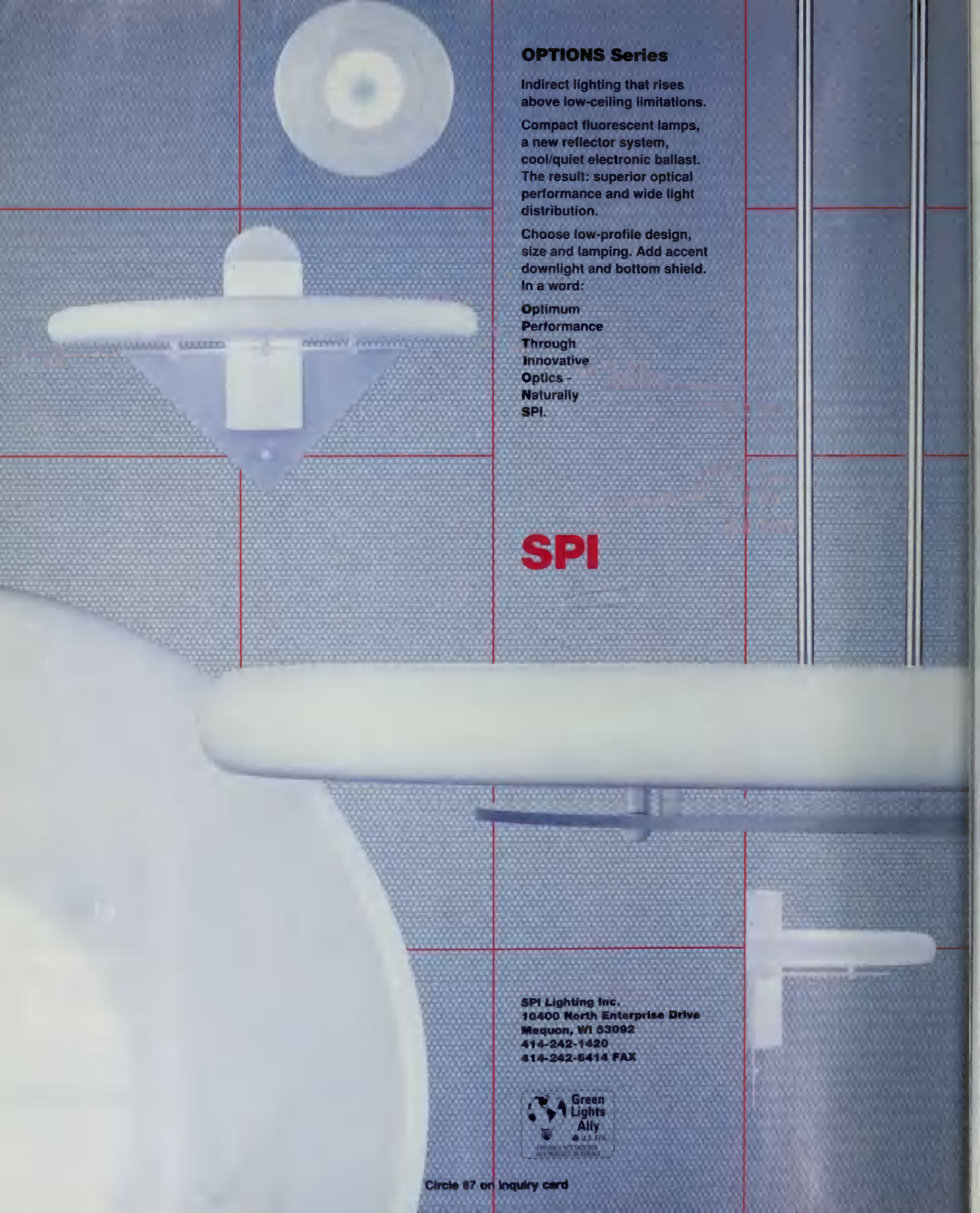

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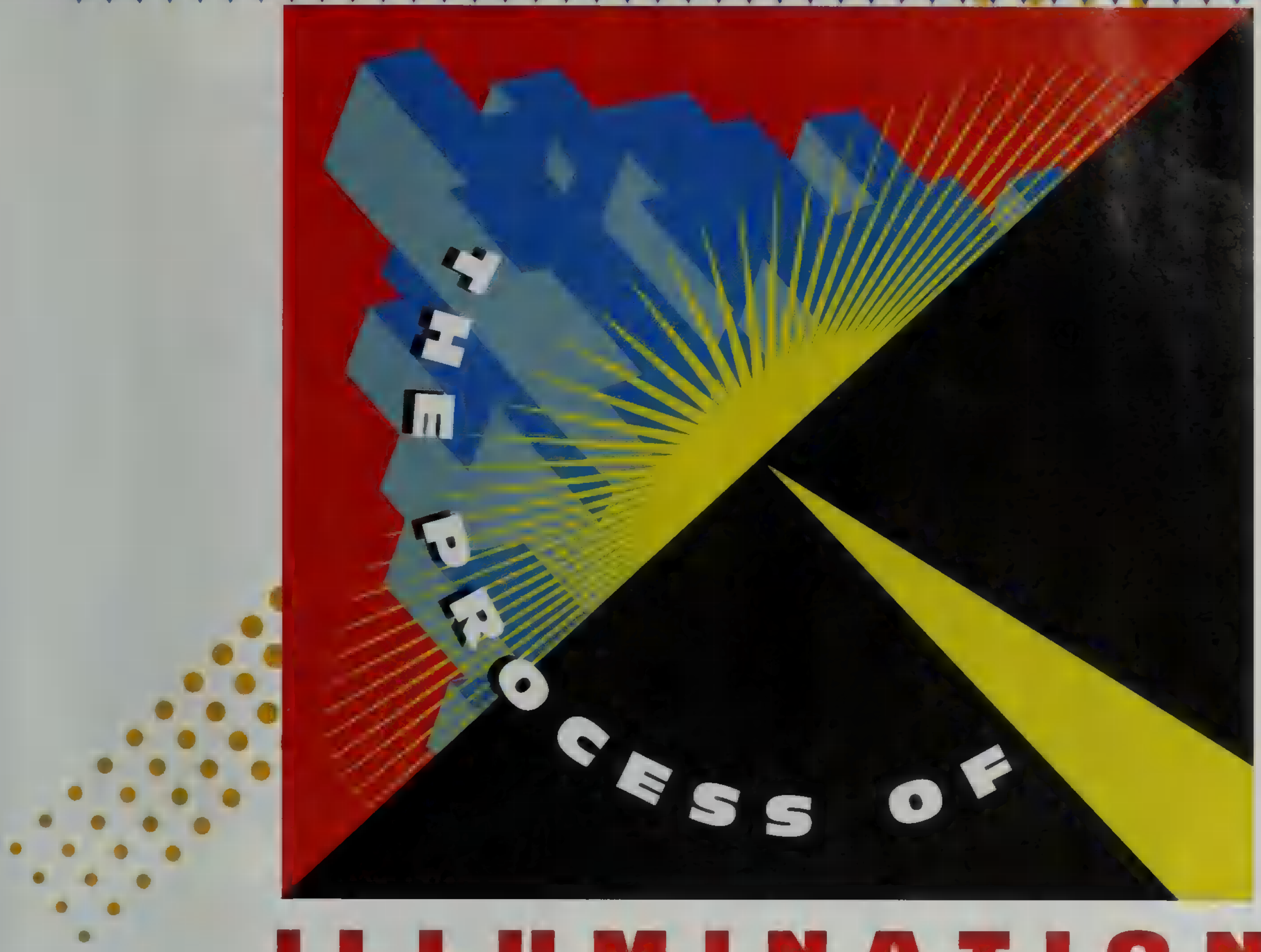

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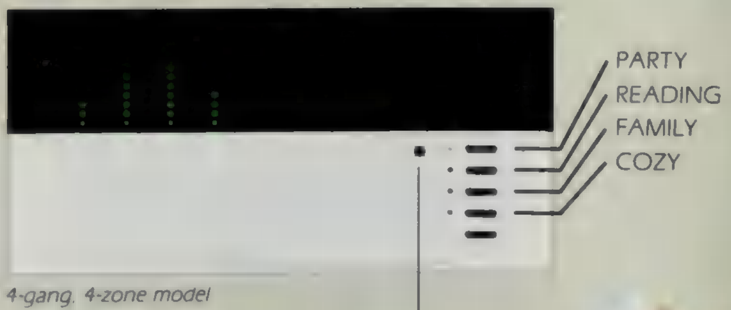

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If You Had Some Artificial Light, Would It Help Illuminate This Article?

I thought the headline on the press release, “National Lighting Bureau calls for elimination of artificial light,” seemed a little twisted. Why would the NLB, an organization whose purpose is “to provide information about lighting to those who make decisions about it,” advocate the demise of its reason for being? Reading on, I found they weren't. Instead they were going public with one of the great secrets of the lighting profession: there is no such thing as artificial light.

I have always agreed with this. In case you've never been corrected, lighting professionals never use the terms “artificial light” or “natural light.” Not in conversation or print. Nothing marks a lighting outsider quicker than a remark like, “Gee, the artificial lighting in this space enables me to see quite clearly even with my eyes closed.” Or, “Look at the lovely natural light playing on the trees over there.” This little faux pas will stop a conversation with a real lighting designer cold.

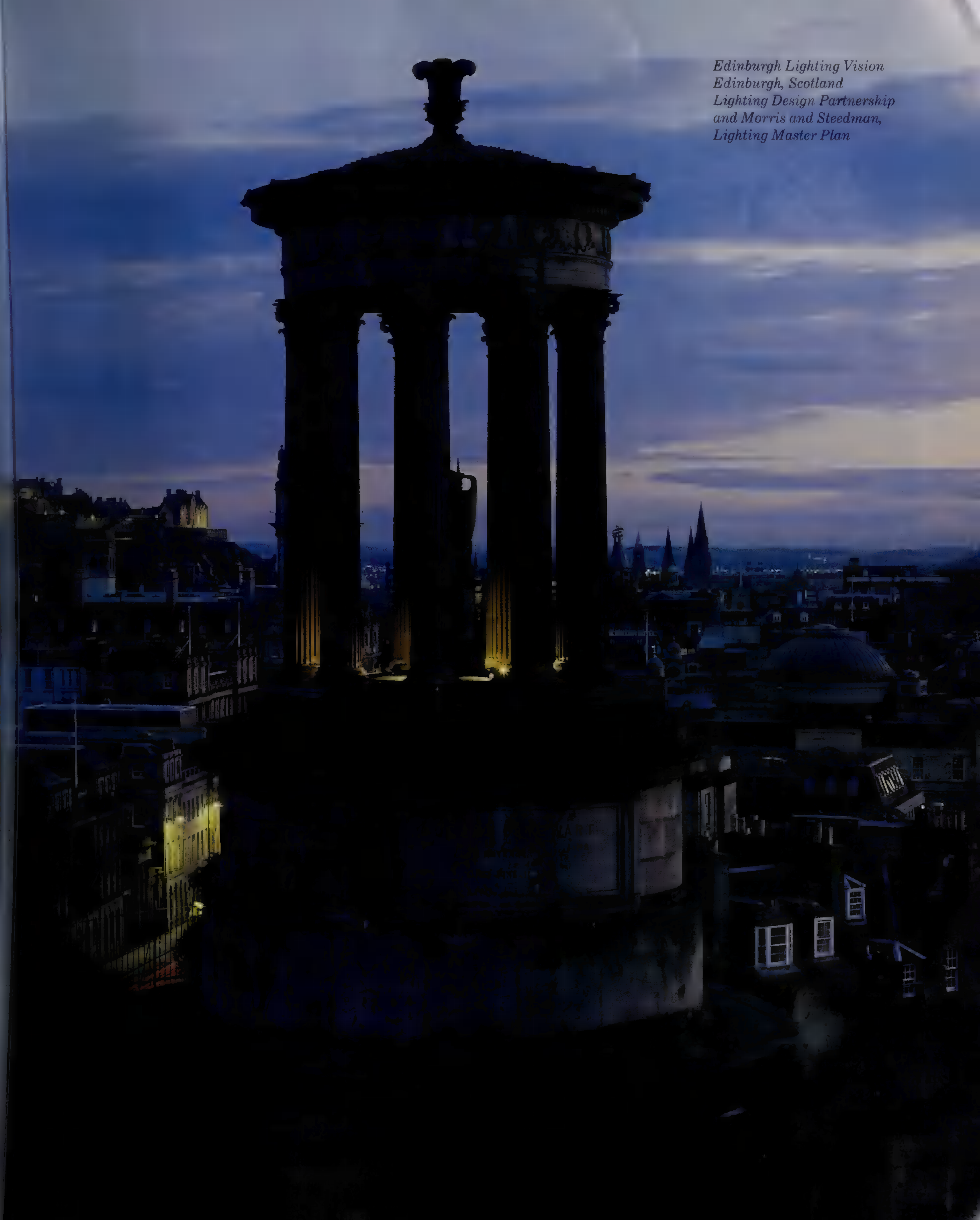
Light is electromagnetic radiation that stimulates the optic nerves. It doesn't matter what the source, so there actually is no such a thing as “artificial light.” You may not have noticed, but RECORD LIGHTING goes to great lengths never to use these terms, although I will admit a few references to “natural light” have slipped by me over the years. Instead of “artificial” or “natural,” the actual source type is used to specify the kind of light under discussion: daylight, gaslight, candlelight, electric light, and so on.

Having advocated the same view as the NLB for years, I was prepared to ignore their press release. But an unrelated paragraph caught my eye, and convinced me I must change my position: artificial light does exist after all. They write: “...by reducing the amount of security lighting available, criminals were given a place to hide, and potential victims were given a false sense of security. Arguably, it would have been better to have no lights on at all, so people would be forewarned and avoid the area altogether, or take appropriate actions. As such, whatever light was provided was not only wasted; it was counterproductive.”

Get it? Artificial light is that light which induces a person into believing they won't get knocked in the head even though they are stumbling around in the dark in a dangerous part of town. I'm with the NLB. Artificial light, whether it exists or not, must be stamped out.
Charles Linn

Night Vision

An urban lighting plan lights Edinburgh's eclectic architectural treasures and rugged topography.



Edinburgh Lighting Vision
Edinburgh, Scotland
Lighting Design Partnership
and Morris and Steedman,
Lighting Master Plan

Edinburgh is a city blessed with an architectural heritage that dates to the 12th century, and an astonishing variety of daylight conditions—including bright, summer midnights—under which it may be seen. But the city also is cursed by winter darkness that falls at 3:30 p.m., shutting down cheer, vistas, and tourism alike until a recent lighting program began to take hold. Now, almost a third of the city's most important sites have been lit under the guidelines of the "Edinburgh Lighting Vision," a masterplan prepared for Lothian and Edinburgh Enterprise Limited (LEEL), a quasi-governmental agency, by the Lighting Design Partnership, architects Morris and Steedman, and architectural historian John Gifford. The goal is "to render the city with the same degree of subtle mystery as can be experienced during a dusky evening or early spring morning."

The Vision sets design guidelines for a consistent lighting image. At LEEL's request, it also proposes systems, budgets, and legislative programs to maintain the lighting schemes over time. Its guidelines also thwart the my-building's-brighter-than-your-building sort of thinking that had racheted the exterior lighting levels of commercial buildings up to 500 cd/m in parts of Edinburgh. "It takes a dark slate to make a statement," says Lighting Design Partnership's Andre Tammes, "but people won't dim down in a fiercely competitive situation." The Vision calls for a limit of 100 cd/m, which, Tammes reports, "other professionals still find too bright."

Like Rome, Edinburgh is built on seven hills, the most prominent of which are the Rock, upholding Edinburgh Castle, and Calton Hill, whose crown of monuments caused Sir Patrick Geddes to call it "a museum of the battle of styles." The two bracket a central core containing the austerely formal New Town, said to be the largest Georgian development in Britain, and the 12th- to 17th-century Old Town with its *wynds* (staired alleys), *pends* (covered alleys), *closes* (alleys with courtyards), and a layered skyline of roofs, towers, spires, and domes that spills down a 100-foot ridge visible from almost every vantage point.

The Vision uses mercury or cool metal halide to emphasize the New Town's classical quality, contrasting its residential nature with warmer interior illumination. The plan lights entire blocks as well as their corners, and encourages the uplighting of complete terraces and crescents, not just single houses or small clusters. Low-wattage washes are used for the comfort of the residents.

The twofold Old Town strategy targets both skyline and the dramatic close-ups, tight vistas, carvings, and figures visible only within the Old Town itself. The plan cautions that schemes for "skyline" buildings in this area must be carried from the topmost feature down to the ground, illuminating chosen features but not necessarily the entire facade. Here, the palette is warm metal halide, with individual buildings and clusters lit as "set pieces," and bright lighting in *closes* to cast an enticing glow into the streets. Theater-district guidelines call for exciting bursts of color, including neon.

The Vision also counteracts the way street lighting isolates pedestrians, eclipses architecture, and inspires ultra-bright facades to compete with it. The guidelines call for sharp-cutoff fixtures to restrict roadway-fixture beams to the road surface. Sidewalks are illuminated by fixtures on low poles, their beams limited to walkway width, and of a contrasting color palette; warm metal halides where vehicular lighting is tungsten halogen; cool mercury where vehicular lighting is high-pressure sodium. This may possibly reduce the instinct for overly bright shop lighting. *Judith Davidsen*

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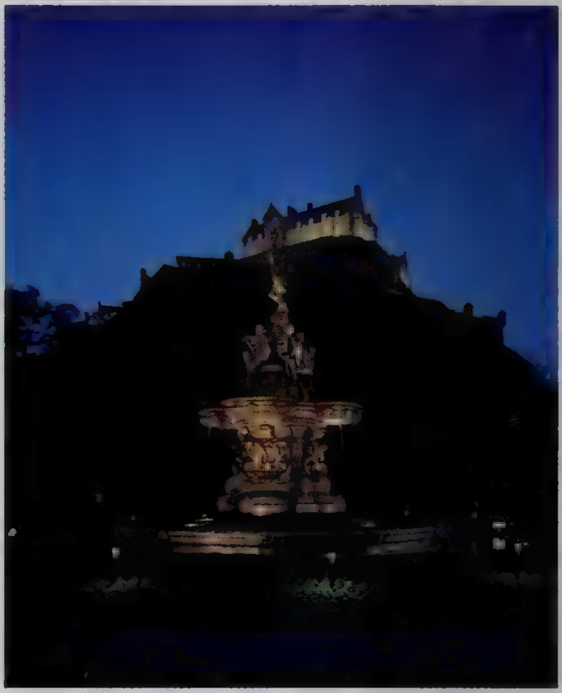
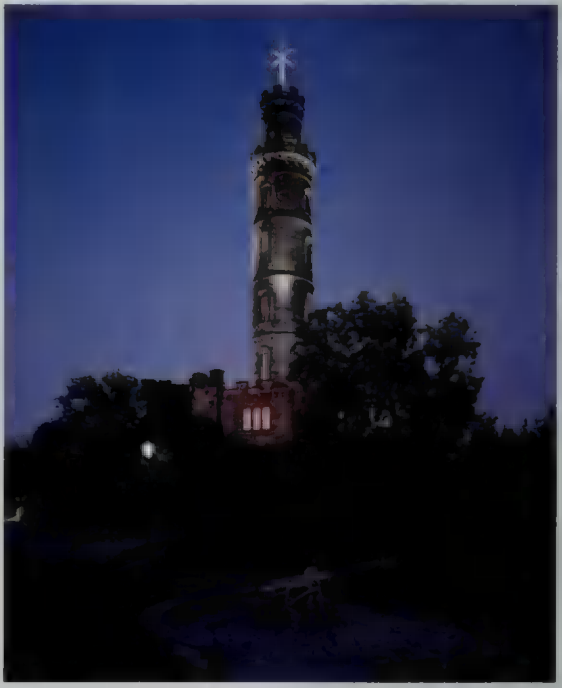
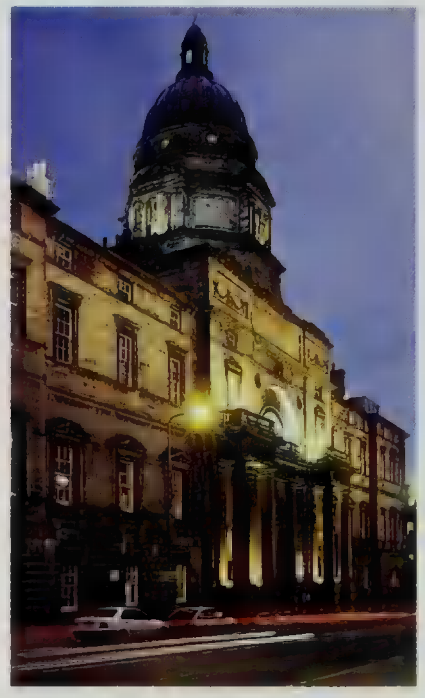
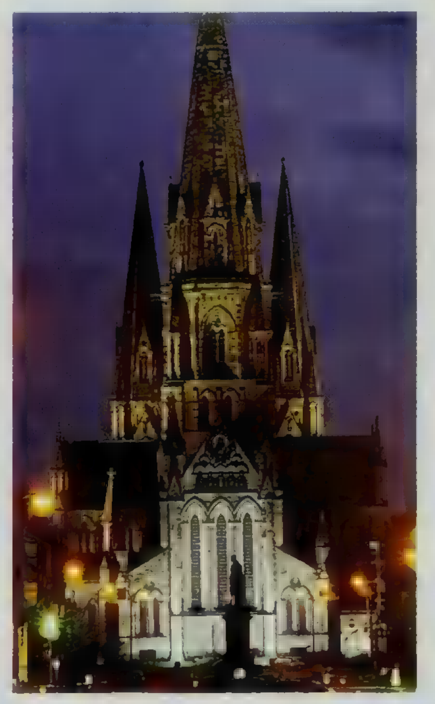
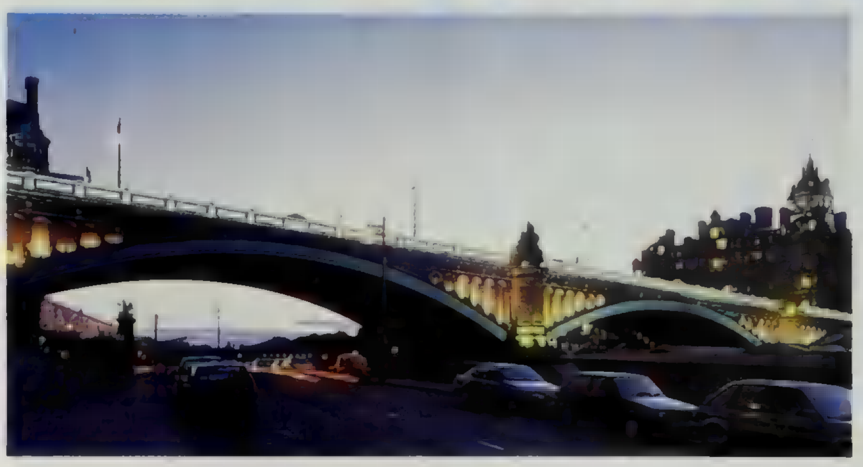


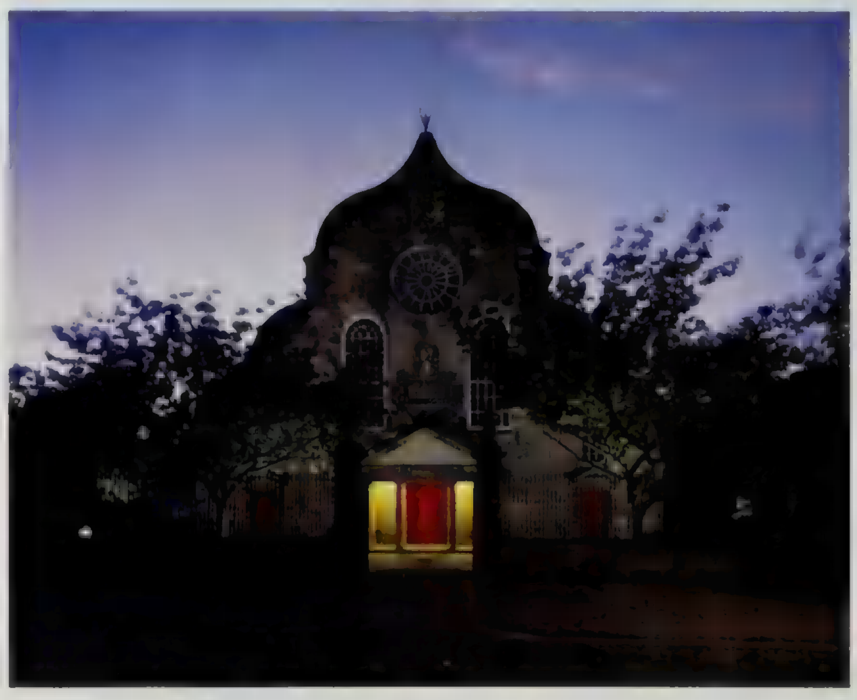


This page: Lighting Design Partnership employed high-pressure sodium spots on the 1862 gilded Ross Fountain (top) and low-level halogen washes on surrounding foliage; below Edinburgh Castle's 20-year-old Philips high-pressure sodium scheme, LDP used a discreet wash of cool metal halide on its rock. LDP used narrow-angle metal halides at the base of the 1807 Nelson Monument on Calton hill (bottom). Opposite: LDP used medium-angle metal halides to emphasize the height of the 1845 New College (top). Jeremy Webber used fluorescent strips along the balcony and mercury halide inside the crowning pagoda at Craiglockhart (bottom).





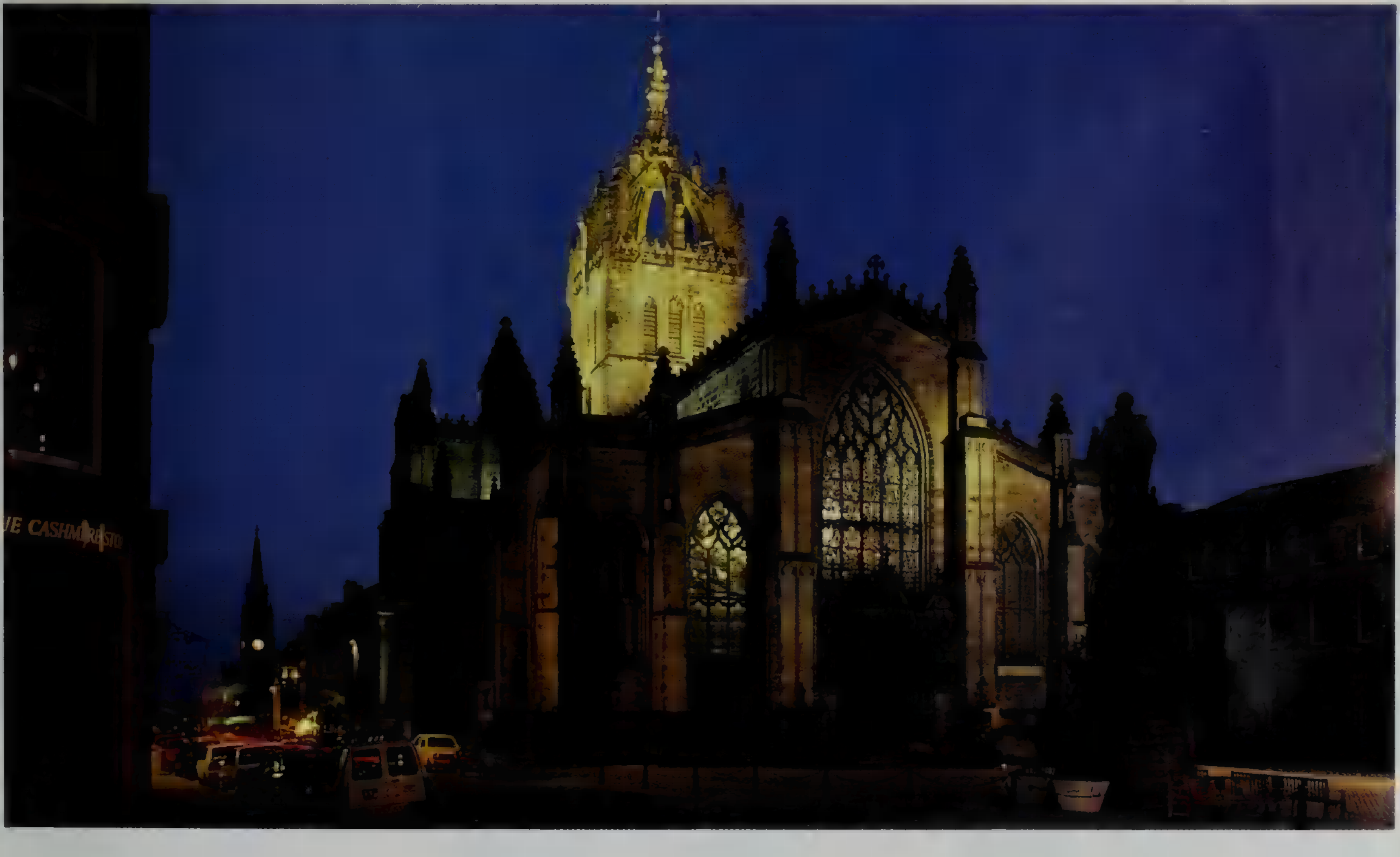




This page: Hawthorne Boyle used high-pressure sodium on the facade of Robert Adam's 1789 Old College (top left) and cool white on the verdigris-covered 1879 dome by R. Rowland Anderson. The firm chose 3400K metal halide to illuminate the age-darkened white sandstone of 1873 St. Mary's Episcopal Cathedral (top right). For the 1898 North Bridge (middle), they employed fluorescents to highlight the parapets, and sodium on the gold tracery in the arches.

Stewart Tod & Partners and Arthur McKay & Co. used high-pressure metal halide to impart a daylight-like glow to the 1688 Canongate Kirk (bottom), and contrasting high-pressure sodium downlights in the portico to silhouette the columns. Opposite: Hawthorne Boyle used floods in the portico interior at the 1832 Royal College of Surgeons (top) in order to silhouette the columns, and gas-powered decoratives, on a timer, on the street wall. At the High Kirk St. Giles (bottom), LDP chose warm metal halides flush in the pavement, and high-pressure sodium inside the peculiarly Scottish crown steeple added in 1500.

Credits
Edinburgh Lighting Vision
Edinburgh, Scotland
Owner: *Lothian and Edinburgh Enterprises Ltd.*
Master Plan: *Lighting Design Partnership, Morris and Steedman, architectural historian John Gifford*
Lighting Designers: *Nelson Monument, Ross Fountain/Castle Rock, New College, St. Giles: Lighting Design Partnership. Craiglockhart: Jeremy Webber. Old College, St. Mary's Episcopal, North Bridge, Royal College of Surgeons: Hawthorne Boyle. Canongate Kirk: Stewart Tod & Partners, Arthur McKay & Co.*



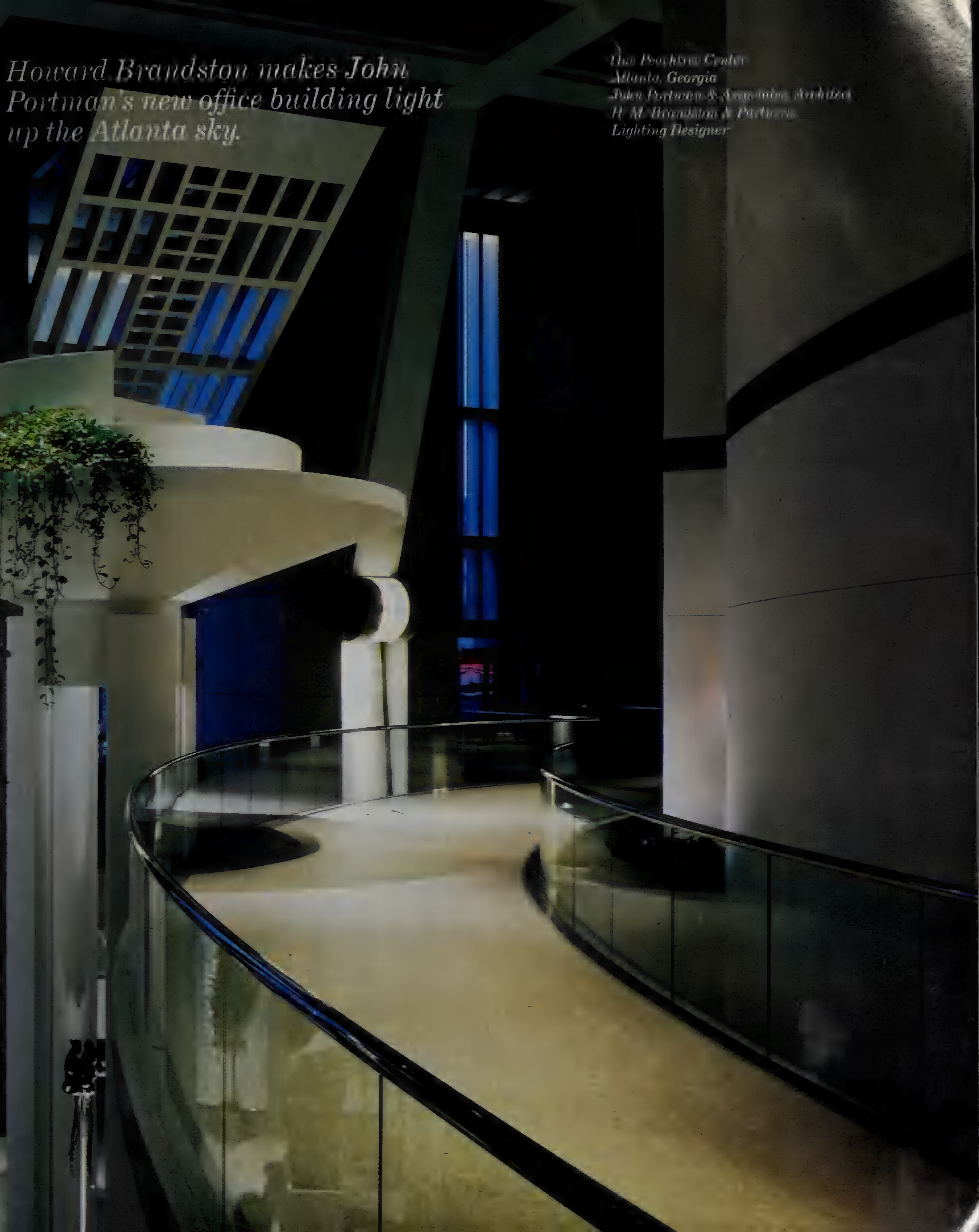
Black and tan marble, anigré veneer, furniture, and artwork glisten under table lamps and accent lighting in a corridor near the ANA Hotel's lobby (opposite).

Translucent sconces and chandelier in the restaurant (top right) wash the ceiling light and help give brightness in the room an apparent source, while recessed accent lights are the major source of brightness for each table. When the lights are dimmed, says Leibow, each table is bathed in its own pool of light, giving diners a sense of privacy. Leibow recommends interior designers specify a light, warm tablecloth to reflect light onto diners' faces, alleviating harsh facial shadows sometimes cast by accent lights.

"Like the lobby spaces, the guest rooms (right) are nice because so many contrasting materials have been used; the rooms aren't finished monochromatically," says Leibow. "The lamps with translucent shades provide most of the diffuse light in the room. They make people look good. The desk lamp has an opaque shade that concentrates the light on the task below, shielding the face where one wouldn't want it."

Credits
ANA Hotel
San Francisco, California
Owner: ANA Hotels
San Francisco
Architect: *Callison Partnership—Bill Karst, Craig Davenport, Robin Holt-Henry, Steve Johnson*
Lighting Designer: *Wheel Gersztoff Friedman Shankar Lighting Design—Babu Shankar, partner-in-charge; Allan Leibow, project designer*
Interior Designer: *Barry Design Association—Robert Barry, Bernie Meranda, Cynthia Forchielli*

City Lights



Howard Brandston makes John Portman's new office building light up the Atlanta sky.

One Peachtree Center
Atlanta, Georgia
John Portman & Associates, Architect
H. M. Brandston & Partners,
Lighting Designer

If any architect today has made a mark on a city, it's John Portman in Atlanta. He has designed and had built some 30 structures in Georgia's capital, including his world-famous Hyatt Regency. For his latest large-scale venture, One Peachtree Center, the architect turned to lighting designer and longtime collaborator Howard Brandston to help ensure that the 62-story office tower stands out in the now Portman-filled skyline.

"This is not a project to be viewed from the property line," says Brandston of the design. To make sure that the building is seen from a distance at night, Brandston devised a variety of lighting solutions, employing mostly off-the-shelf hardware. He outlined the stepped glass pyramid top of the building with a fluorescent baffle system, creating a bold graphic edge against the sky. The top is crowned with a ring of 36 1000W narrow-beam spotlights, aimed 15 degrees above the horizontal to act as a beacon. Five-foot-high half-moon granite sconces with clear incandescent lamps are integrated into the exterior skin.

Inside, granite sconces reappear along the perimeter of the lobby in 2-foot-high versions (previous pages). Nine-inch-wide diffusers of 1/2-inch-diameter solid-glass rods refract the light, making it appear "kinetic," according to Brandston. The sconces repeat the forms of the architect's curved granite benches located below. These are softly lit by a PAR lamp integrated into the bottom of the sconces. While fluorescent channels concealed above service catwalks provide additional ambient light, interior sculptures by Portman are highlighted by incandescent track fixtures. In the elevator corridors, Brandston sought to reinforce the architecture by intensifying the sense of perspective in the narrow, high space (next page). Arches are lit with lensed wallwashers of varying light levels as one moves through the space. Brandston likens the corridors to aisles of a Gothic cathedral. At a smaller scale, wall brackets accent elevator portals. The center of the 67-foot-high lobby is topped with an acrylic and metal umbrella-shaped dome, lit indirectly by cold-cathode lamps recessed in a cove. Explains Brandston of the overall effect: "Portman has shaped Atlanta. We wanted to respect the themes established in his work and his tradition of making festive places. Like his architecture, the lighting is meant to get attention." *Karen D. Stein*

Credits
One Peachtree Center
Atlanta, Georgia
Owner: *Peachtree 400 Associates Limited*
Architect: *John Portman & Associates—John Portman, principal-in-charge; Richards Mixon, Erin Uesugi, Raphael Samach, Vernon Smith, John Nipaver, and Scott Jones, project team*
Lighting Designer: *H. M. Brandston & Partners—Howard Brandston and Robert Prouse, principals-in-charge; Randy Sabedra, project manager; Heidi Galasini, assistant*
Engineers: *Newcomb & Boyd—Steve F. Bruning, project engineer (electrical); John Portman & Associates—Housh Rahimzadeh, project engineer (structural)*
General Contractor: *J. A. Jones Construction Company—Robert Douma, project manager*

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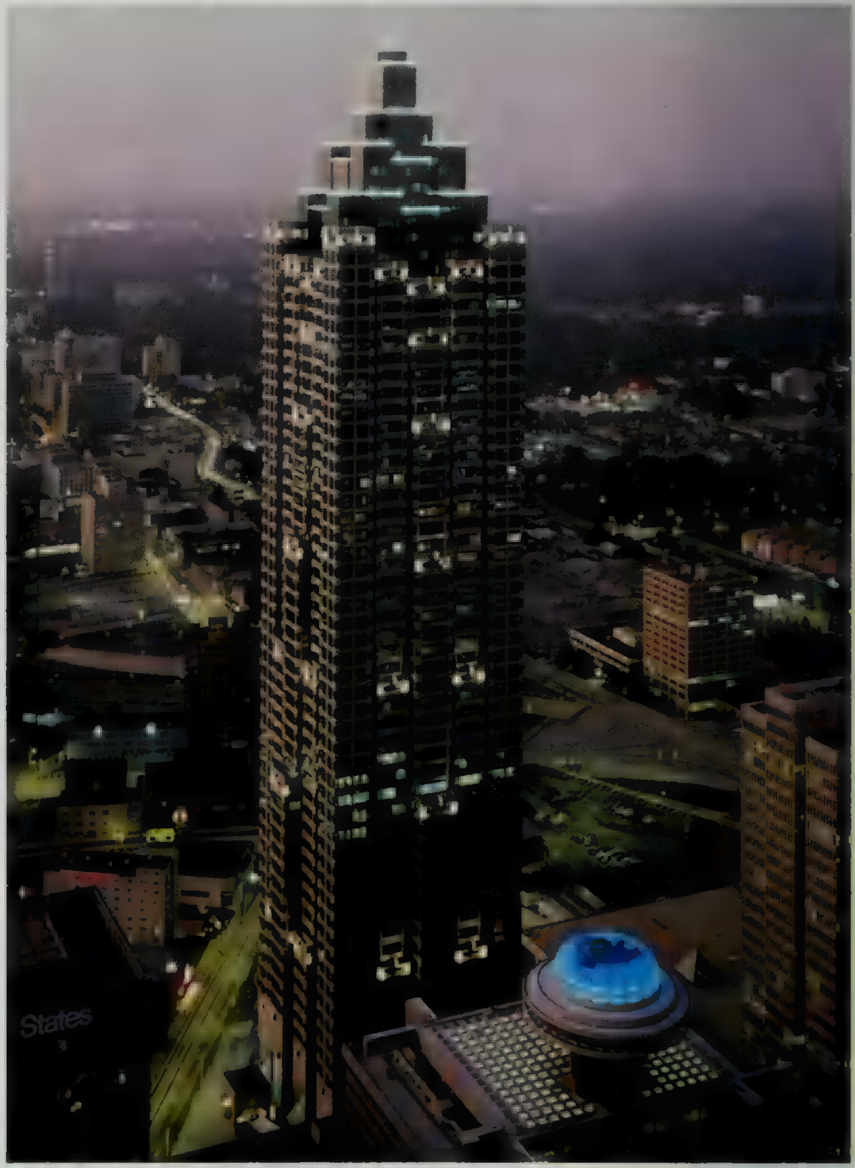
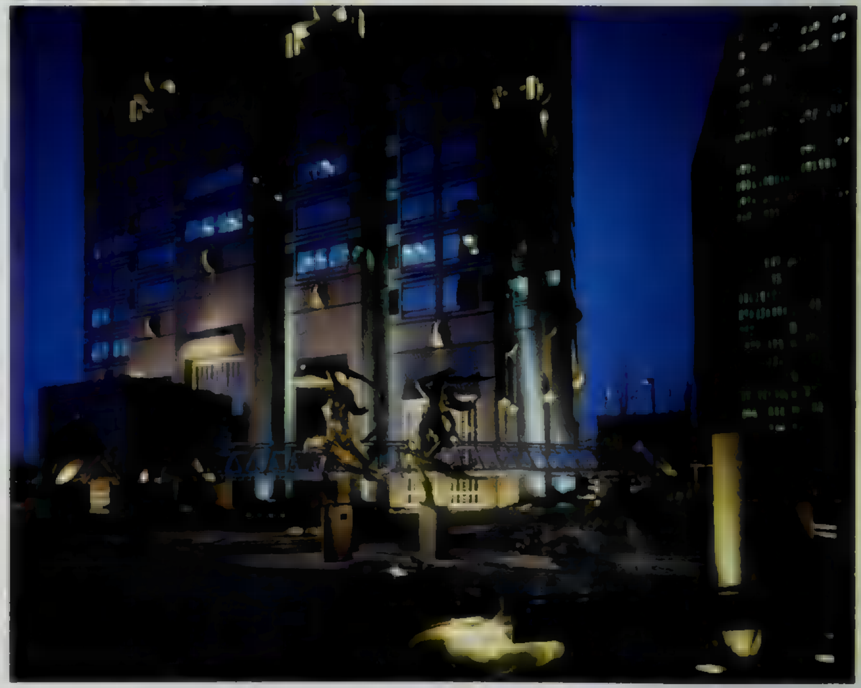


© Michael Portman

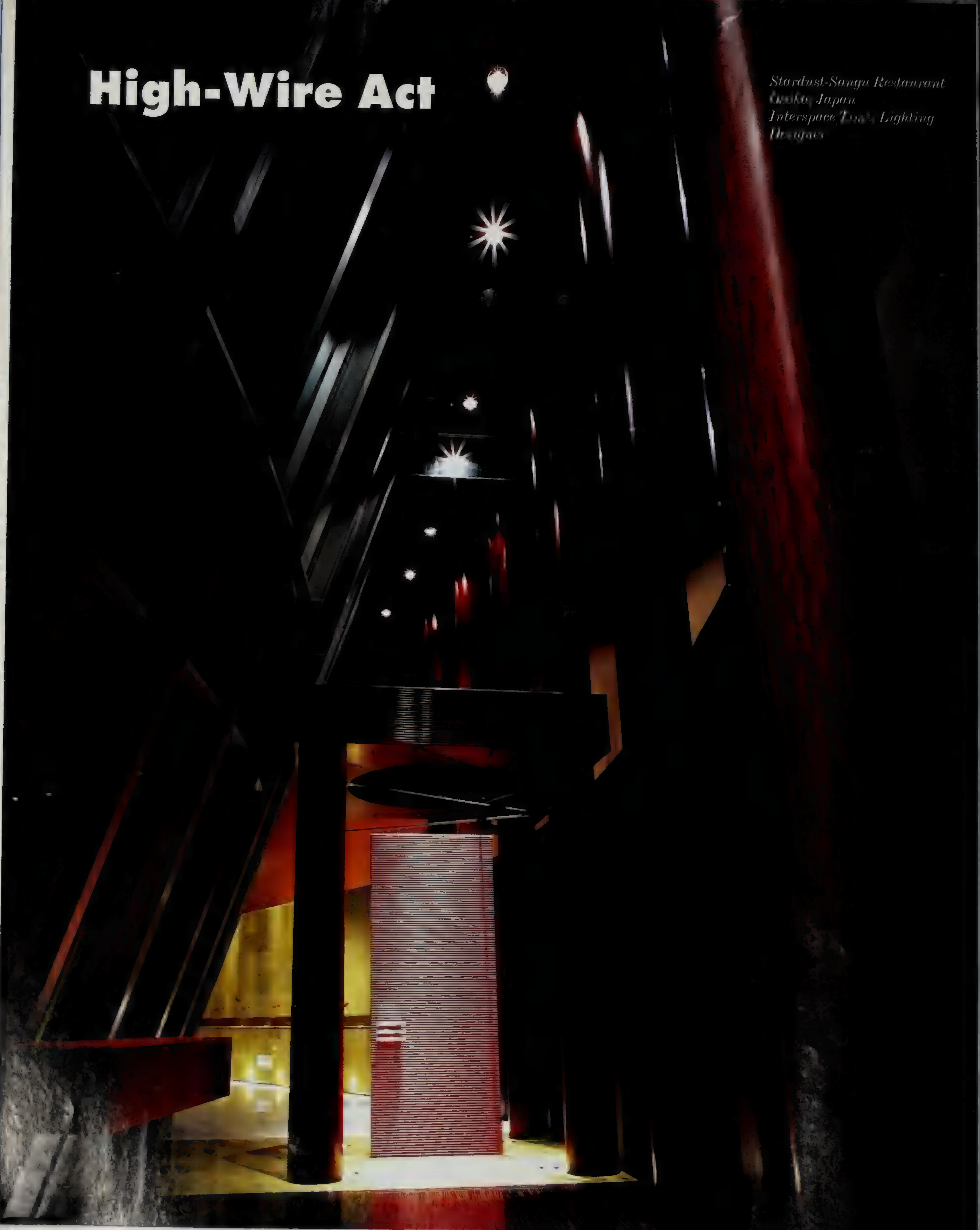


Brandston wanted to create a sense of well-lit security at the base of the building. At night, incandescent underwater fixtures in reflecting pools and metal-halide floodlights concealed in stone bollards uplight the building and suspended glass walkways (bottom). The top is dramatically highlighted by fluorescent fixtures and narrow spot downlights (top).

© Michael Portman

High-Wire Act

Stardust-Sangu Restaurant
Osaka, Japan
Interspace [illegible] Lighting
Designers



ung between two high-rise office towers at the 39th floor, the Stardust-Sangu Restaurant is one of those places you don't easily forget. As the centerpiece of architect Hiroshi Hara's Shin Umeda City complex in Osaka, the restaurant is a 100-foot-wide metal-and-glass nut floating in space without its bolt. Given this spectacular setting, the challenge for Interspace Time was to create a series of interiors that wouldn't be upstaged by the building's architecture.

Although weak-kneed patrons can arrive by elevator, the most dramatic way to enter the restaurant is via the exposed escalators shooting from the 36th floor of the west tower to the 39th floor of the east tower. As visitors glide through the hole at the center of the structure, the restaurant glows vibrantly from inside the 21-foot-high canted glass wall. From this first impression, it is clear that Interspace Time's approach to both the interiors and the lighting is to use color, texture, and light to underscore strong contrasts. The firm's principal-in-charge, Stom Ushidate, calls the project a "stage setting in mid-air."

Sleek and contemporary, the Stardust-Sangu Restaurant is a sequence of bars, lounges, and dining areas that unfold around the building's curving geometry. The entry lobby (top right) is a bright welcoming space with a coat-check counter and maitre d's desk that seem to defy gravity by resting on thin polished-metal supports. Small 12V 50W downlights designed by Ushidate disappear in the center of the ceiling, but shine on the white-marble floor and help direct visitors down the main corridor of the restaurant. Above the lobby's curving banquette, the designer combines cove lighting with tiny 12V 20W halogen downlights that imitate the twinkling of stars.

In the main corridor Ushidate blends traditional elements such as columns, white marble, and wood veneers with a modern, cinematic feeling that results in dramatic contrasts of dark and light. For the low soffit of the corridor, Ushidate designed a universal 12V 50W halogen downlight that is a deeper fixture and casts less glare than typical Japanese ones. In the high portion of the ceiling, cable-suspended downlights with regular 100W lamps are used for ambient lighting.

General lighting in most rooms is provided by adjustable 12V 50W halogen downlights that can pivot and be directed at tables. For banquette seating areas in the lounges and bars, the designer used the same combination of cove lighting and twinkling halogens as in the lobby. On the tables, custom-designed pen lights in polished-chrome candelabras add to the star-studded atmosphere. Another memorable feature is a bar where bottle shelves and back counter are lit with a combination of four colored lamps attached to a dimmer. As a result, bartenders can mix colors, as well as drinks.

In dining areas at night, city lights seen through circular windows are complemented by halogen downlights that make flatware and silverware cast strong shadows on white tablecloths. To inject a further touch of animation, the designer used alcohol lamps that flutter like flames in bracket lights set on perimeter walls and columns. The same alcohol lamps are used in eight 3.5-foot-tall light posts at the end of banquette tables. Precisely placed mirrors bounce these flickering lights around the room in what Ushidate calls "lightwaves." Even in the restrooms, dramatic illusions are maintained: low lighting levels and smoked mirrors create a distinctly theatrical setting for powdering one's nose. The idea, says Ushidate, is to light just the person's face and not much else. It's a show that never ends.
Clifford A. Pearson

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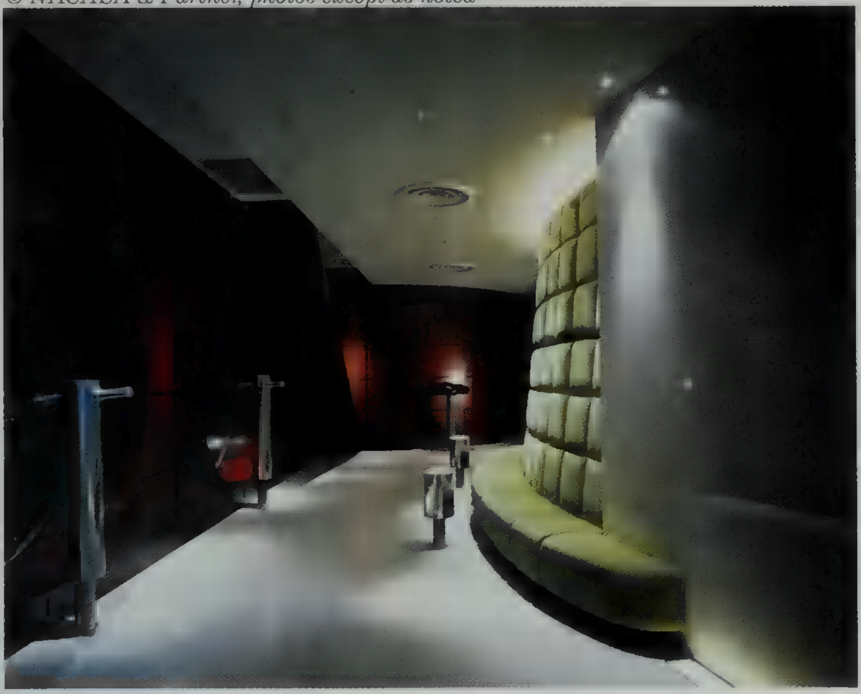
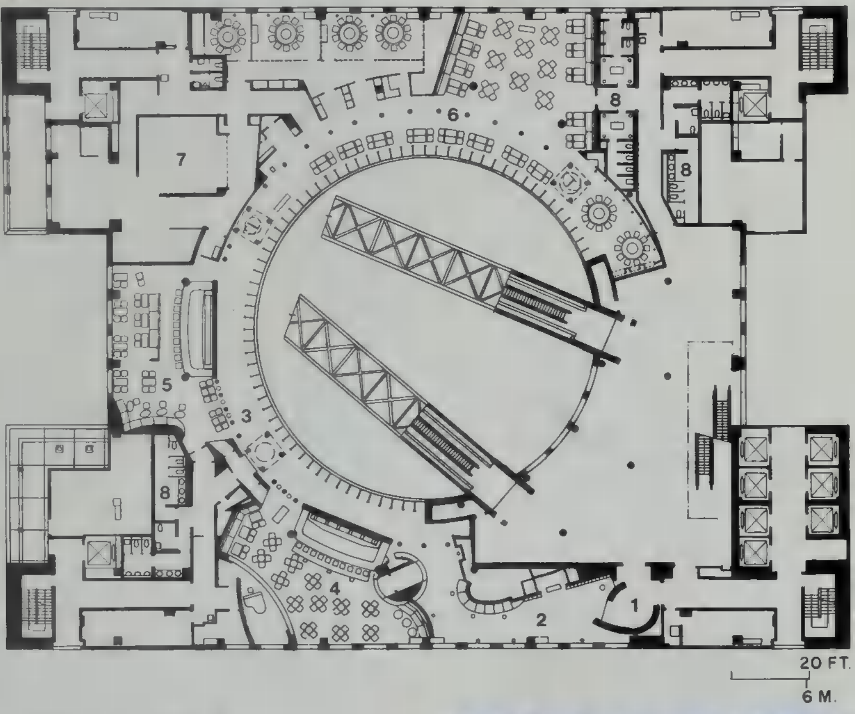
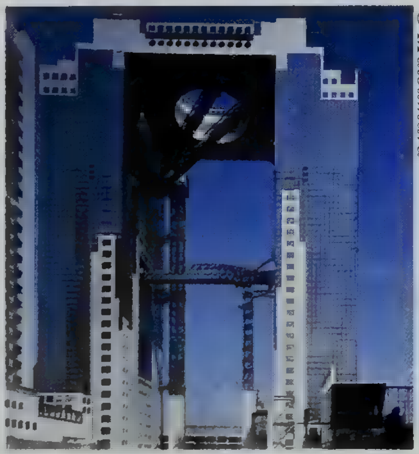


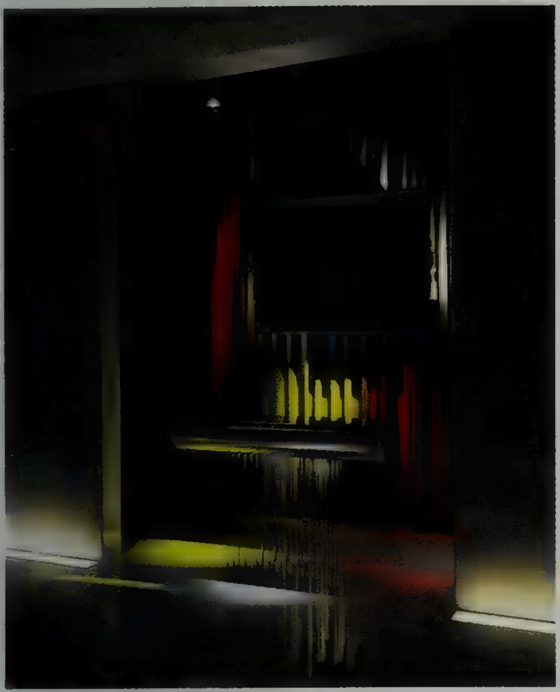


1. *Entry vestibule*
2. *Lobby*
3. *Corridor*
4. *Stardust lounge*
5. *Bar*
6. *Sangu restaurant*
7. *Kitchen*
8. *Restroom*



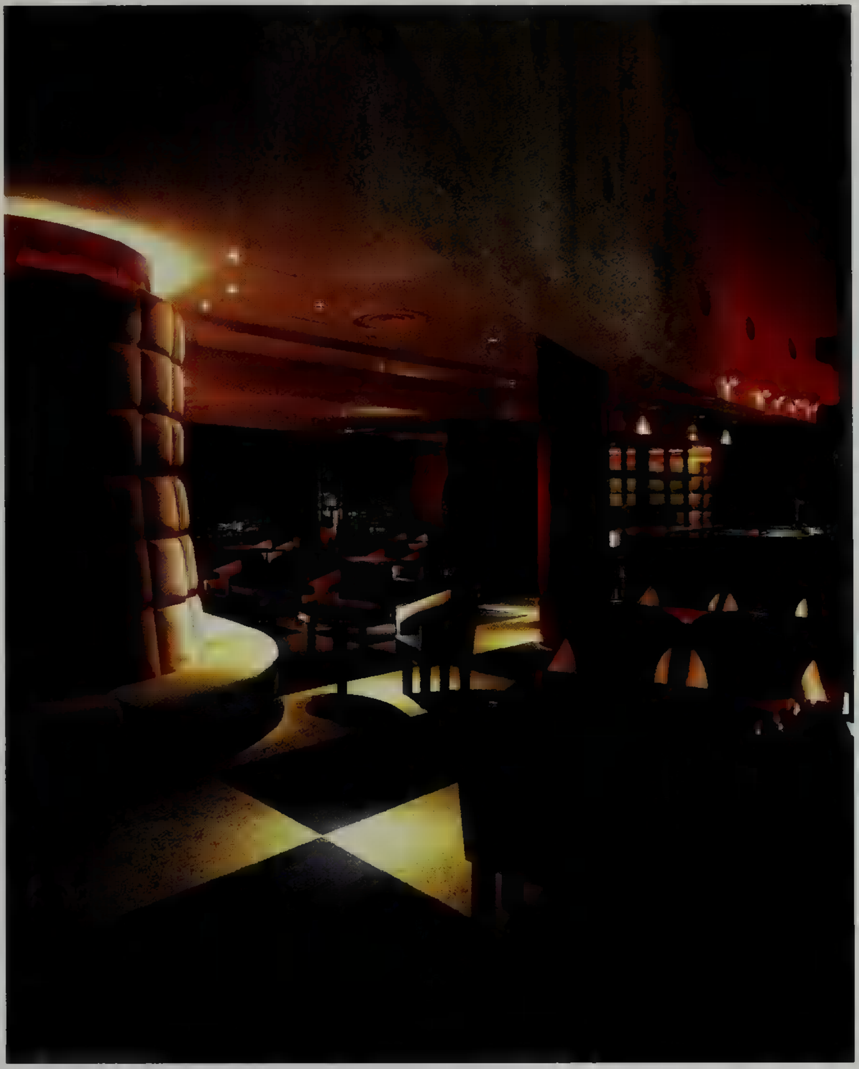
© Matsumura

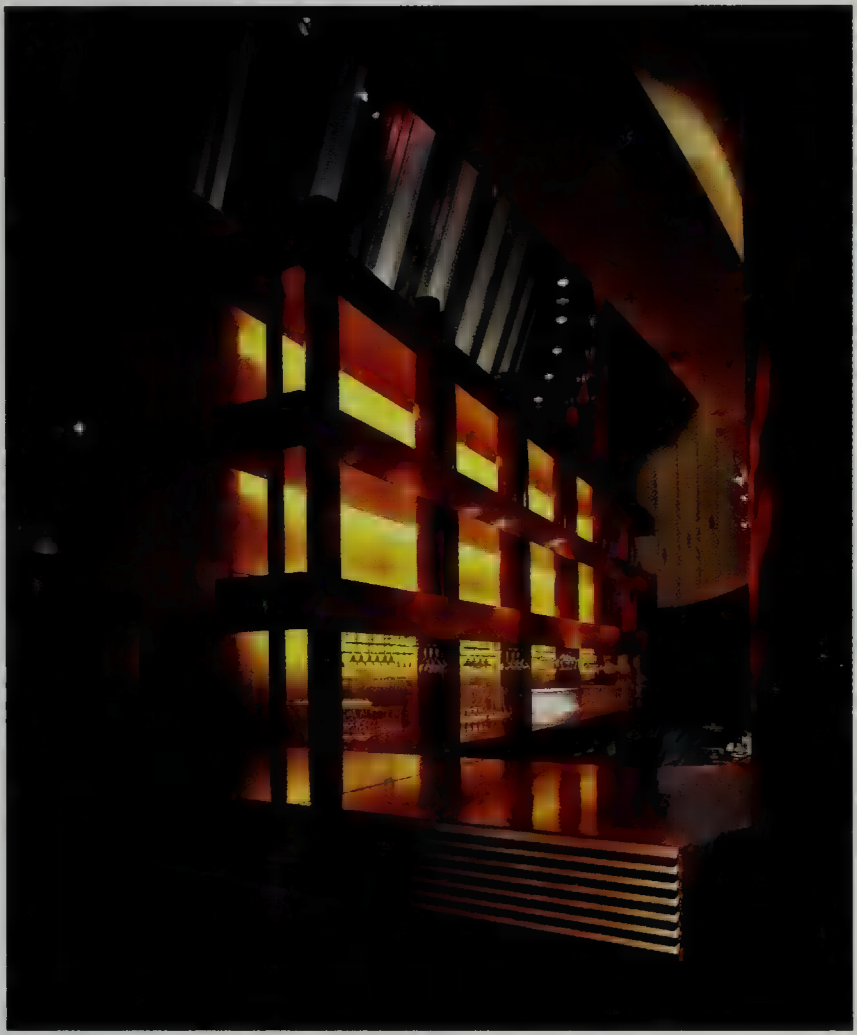
The restaurant is set atop Shin Umeda City (above). Traditional and contemporary elements are combined in the lobby (top) and the 21-foot-high main corridor (opposite).



Just as the architects established contrasts between dark and light areas, they also alternated enclosed spaces with more expansive ones. For example, a tight entry with hard reflective surfaces leads to the more spacious Stardust lounge where soft materials and forms prevail (opposite). Illumination in the lounge is provided by a combination of cove lighting and halogens. On the tables, custom-designed pen lights in polished-chrome stands seem to float in mid-air (following spread). The coat-check counter (above) also appears to defy gravity, hovering above the floor on thin-metal legs. In the bar area (top right) the colors and forms evoke the feeling of the 1930s. The bar itself is equipped with four different colored lights controlled by a dimmer (bottom right).

Credits
Stardust-Sangu Restaurant
Osaka, Japan
Architect: *Hiroshi Hara + Atelier*
Interior/Lighting Designer: *Interspace Time—Stom Ushidate, principal-in-charge; Yuka Mizutani, Robert Lowe, Michael Labasan, design team*
General Contractor, Interior: *Tanseisha*





Technology

Continued from page 16

stopped filtering after being exposed to 150-degree F. temperatures for a few weeks. Glass filters, which retain their filtering abilities at high temperatures, are available.

Conclusion

Don't avoid high-efficiency light sources for fear of their UV component. Our tests show that normal levels of fluorescent lighting yield little in the way of harmful UV rays, and that very effective UV filtering is available, if required, even at high fixture temperatures. ■

Manufacturer Sources

For your convenience in locating fixtures and other products shown in feature articles, RECORD has asked the architects and lighting designers to identify their sources.

Pages 22-27
Edinburgh Lighting Vision, Edinburgh, Scotland
Lighting Design Partnership and Morris and Steadman, Lighting Master Plan

Pages 24-25, 27
Ross Fountain, Castle Rock, Nelson Monument, New College, and High Kirk St. Giles
The Lighting Design Partnership, lighting designers
Fixtures by: Kim Lighting; The Light Corporation; Willy Meyer+Sohn GmbH + Co.; Hoffmeister-Leuchten GmbH & Co. KG; Thorn Lighting, Ltd.; Urbis Lighting Ltd.; Sugg Lighting Ltd.; BEGA Gantenbrink-Leuchten OHG; Holophane Europe Ltd.; Philips Lighting Ltd.; Franz Sill GmbH; Light Projects Ltd.

Page 25
Craiglockhart
Jeremy Webber, lighting designer
Philips Lighting Ltd.

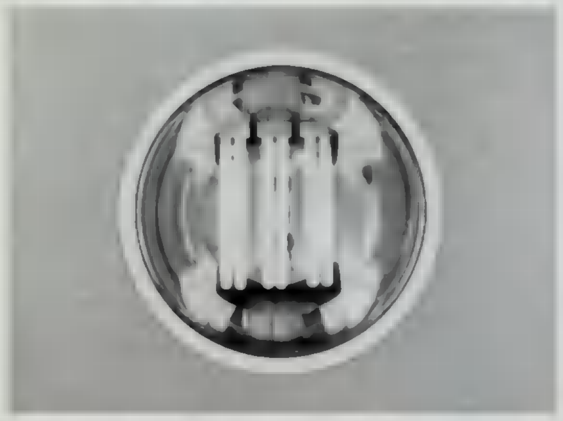
Page 24
Canongate Kirk
Stewart Tod & Partners and Arthur McKay & Co., lighting designers
Metal halides: Philips Lighting Ltd. High-pressure sodium: Thorn Lighting Ltd. Custom grills: Arthur McKay & Co.

Pages 26-27
St. Mary's Episcopal Cathedral; Old College; Royal College of Surgeons
Hawthorne Boyle, lighting designer
St. Mary's—Thorn Lighting, Ltd.; Philips Lighting Ltd.; Phosco; Willy Meyer+Sohn GmbH + Co. Old College—Phosco, Holophane, Chalmit, Thorn, Thorlux. North Bridge—custom fluorescents by McGeoch & McPhail; floods by Thorlux, GE Sylvania, Philips, Meyer.
Royal College—Phosco, Chalmit, Designplan; gas-powered decoratives by Sugg Lighting.

Pages 28-31
ANA Hotel, San Francisco
Callison Partnership, Architect
Wheel Gersztoff Friedman Shankar, Lighting Designer
Barry Design Associates, Interiors
Downlights: Edison Price. Lobby chandeliers: Sirmos. Restaurant chandeliers and sconces: Hilliard. Table lamps: HRS. Lobby torchères: Boyd Lighting. Socket channel: Nessen; Norbert Belfer. Dimming: Lutron.

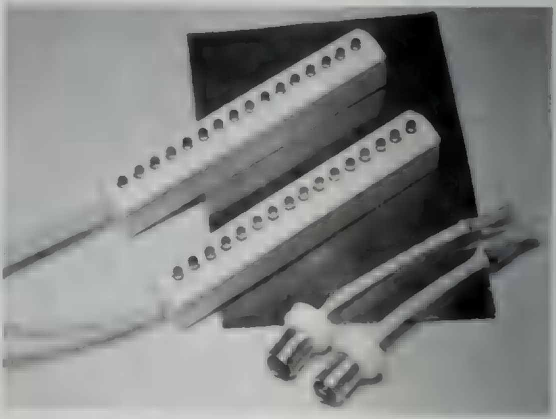
Pages 32-35
One Peachtree Center, Atlanta
John Portman & Associates, Architect
H.M. Brandston & Partners, Lighting Designer
Custom lobby and exterior sconces: NL Corp. Floodlights: Arc Lighting. Underwater floodlighting: Hobbs. Rooftop light sculpture: Northstar. Rooftop linear fluorescent: Jam Co. Track-mounted accents: Litelab. Recessed downlights: Lithonia; Kurt Versen; Edison Price. Quartz uplights: Sterner Lighting. Architectural cove fixture: custom by architect, fabricated by Custom Plastics, Inc. Cold cathode: National Cathode.

New Products



316. Three-lamp fluorescent downlight
Designed for use in high ceilings or where additional illumination levels are needed, the CFR918/26 recessed downlight accepts three 18W or 26W quads, wired for three-level switching. Nine-in.-aperture fixtures are said to provide glare-free, controlled lighting. Reflectors come in Alzak, gold, and black. Photometric and other data available via Lite*Pro software. Prescolite-USI Lighting, San Leandro, Calif.

317. Large-capacity raceway
A multichannel nonmetallic surface system, the 5500 raceway is said to be able to accommodate the highest cable fill in the category, delivering up to four standard power, data, voice, or other devices in less than seven horizontal inches. Can be configured in three compartments; dividers can be added or removed in the field. Standard ivory PVC finish can be painted. Wiremold, West Hartford, Conn.



318. LED exit retrofit
Recently approved under UL-924 (1992) for all electrical, safety, and visibility requirements necessary for use in an exit sign, the AstraLite 2000 is described as the only light-emitting diode retrofit kit capable of replacing virtually any existing sign's light source. Even, extremely efficient illumination from sources with a 100-year service life. AstraLite, Annadale, N.J. ■

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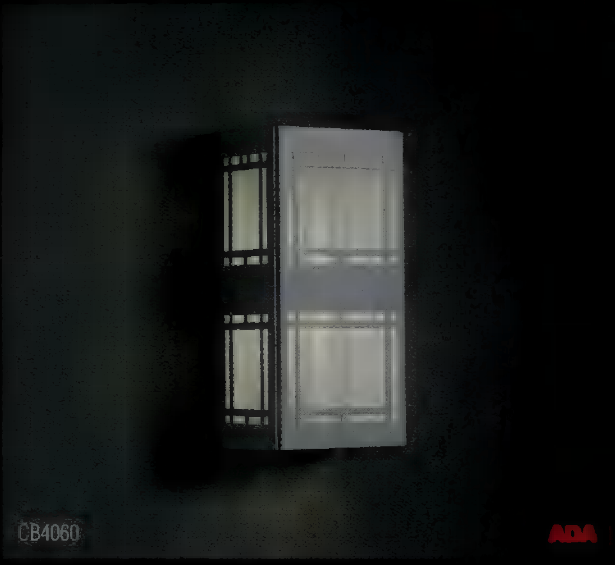

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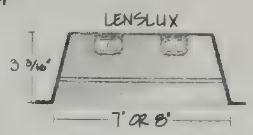

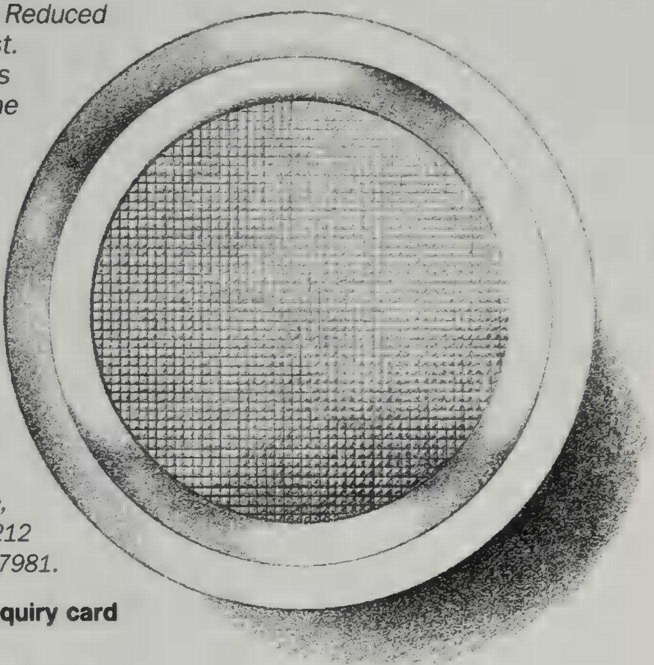

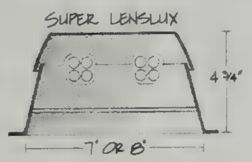

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Product Literature Spotlight

Here are some building products, catalogs, brochures, and technical literature available in the architectural market today. To receive your copy of any of them, circle the corresponding number on the Reader Service Card.

Hanover Lantern Commercial Lighting

Hanover Lantern designs & manufactures high quality heavy duty cast titanium/aluminum commercial grade decorative lighting fixtures, poles & accessories. A selection of design styles, light source options, light distribution systems, mounting options, computer generated photometric data plus a custom design service are available to the architect or engineer. 470 High St., Hanover PA 173331. Phone (717) 632-6464, fax (717) 632-5039

Hanover Lantern

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Gordon, Inc.

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In Grade Up Lights

This 36 page catalog covers the new, innovative 9000 Series Ingrade Lighting fixtures. See how modular design makes a difference in performance, installation, maintenance, and durability. Available in a variety of configurations, this series accepts lamps to 175W HID, 250W incandescent. Architectural and landscape illustrations include recommendations for the most common applications. Hydrel, Sylmar, California.

Hydrel

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Control Station Brochure

Say goodbye to unsightly banks of toggle switches and wall box dimmers! Up to eight switches for dimming and preset scene control can be housed in a single gang space. Vantage stations are fully programmable and available in a variety of colors and finishes to complement any decor.

Vantage Controls, Inc.

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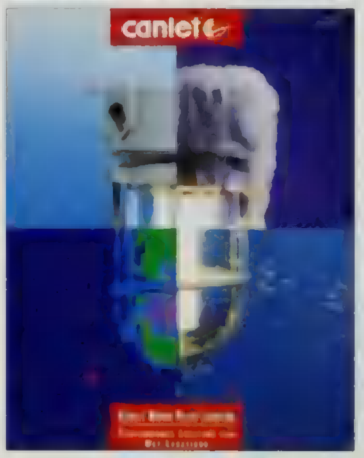
Energy Efficient Wet Location Lighting Catalog



Canlet's new 8-page full color catalog details the line of incandescent and energy efficient compact fluorescent vapor-proof fixtures. These products feature nonmetallic construction, energy efficient cold temperature electronic ballasts and UL Marine listing. New products for 1994 include a prismatic polycarbonate reflector and an internal grounding strap for hub-to-hub grounding. Call 1-800-461-5300. The catalog also appears in the 1994 Sweets Light Source.

Canplas Industries Ltd.

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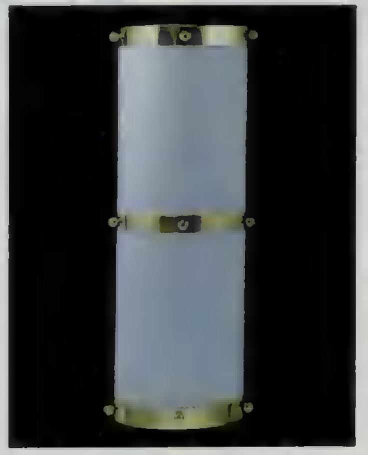
ADA Compliant Wall Sconce



The Original Cast Lighting introduces a line of ADA compliant wall sconces which compliment our full catalog. Shown here is our #CYS-06AB-BA1-4P. The fixture is 6"W x 18"H x 4" projection. It is available in a variety of metal finishes and will accommodate two (2) energy efficient 13W PL lamps. For information on additional ADA compliant wall sconces, please call (314) 863-1895.

The Original Cast Lighting

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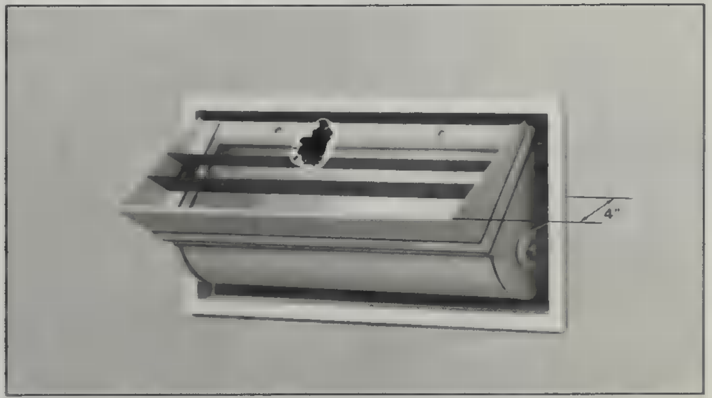

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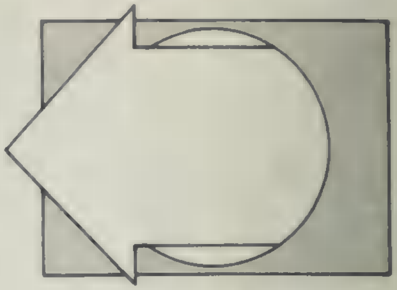

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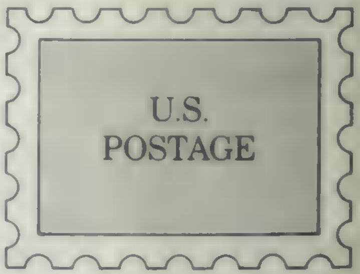

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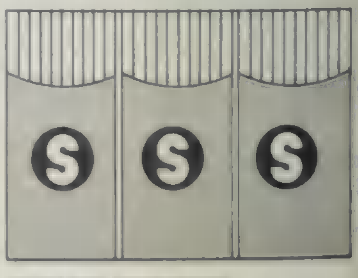

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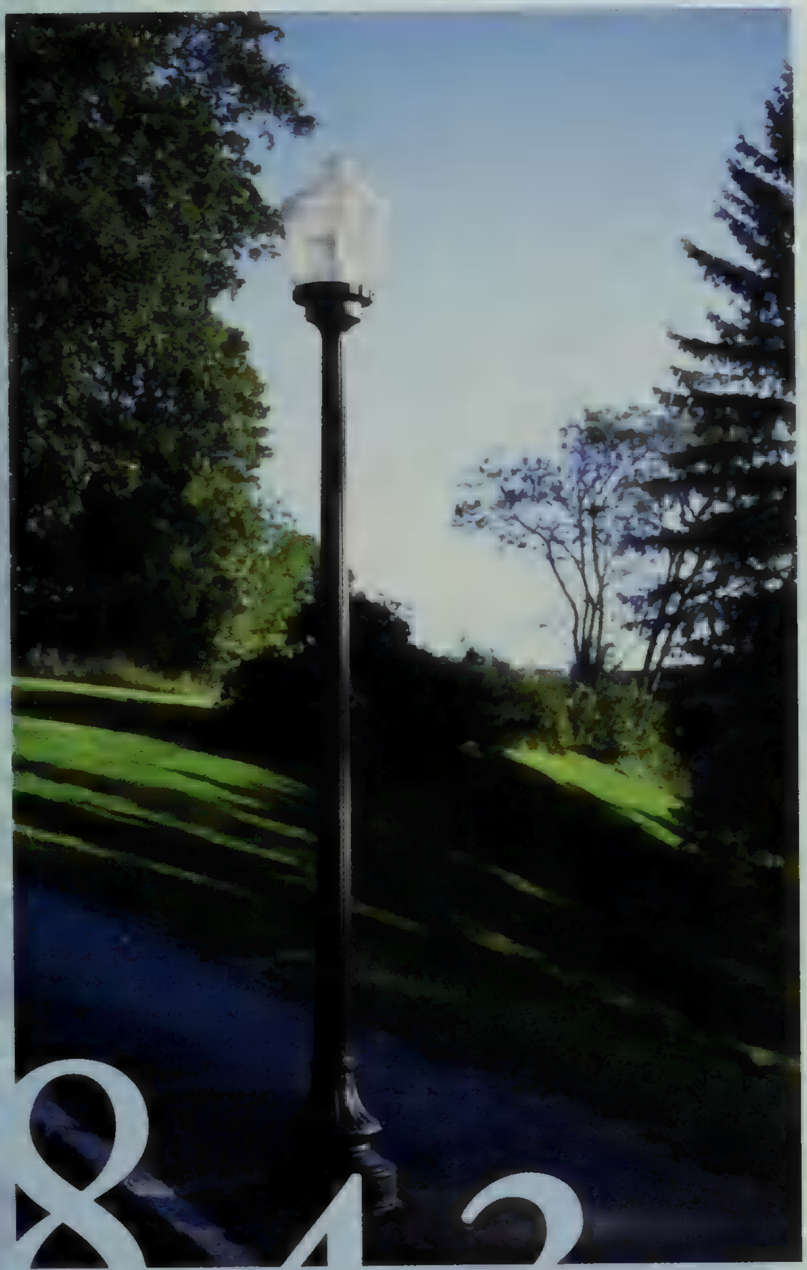

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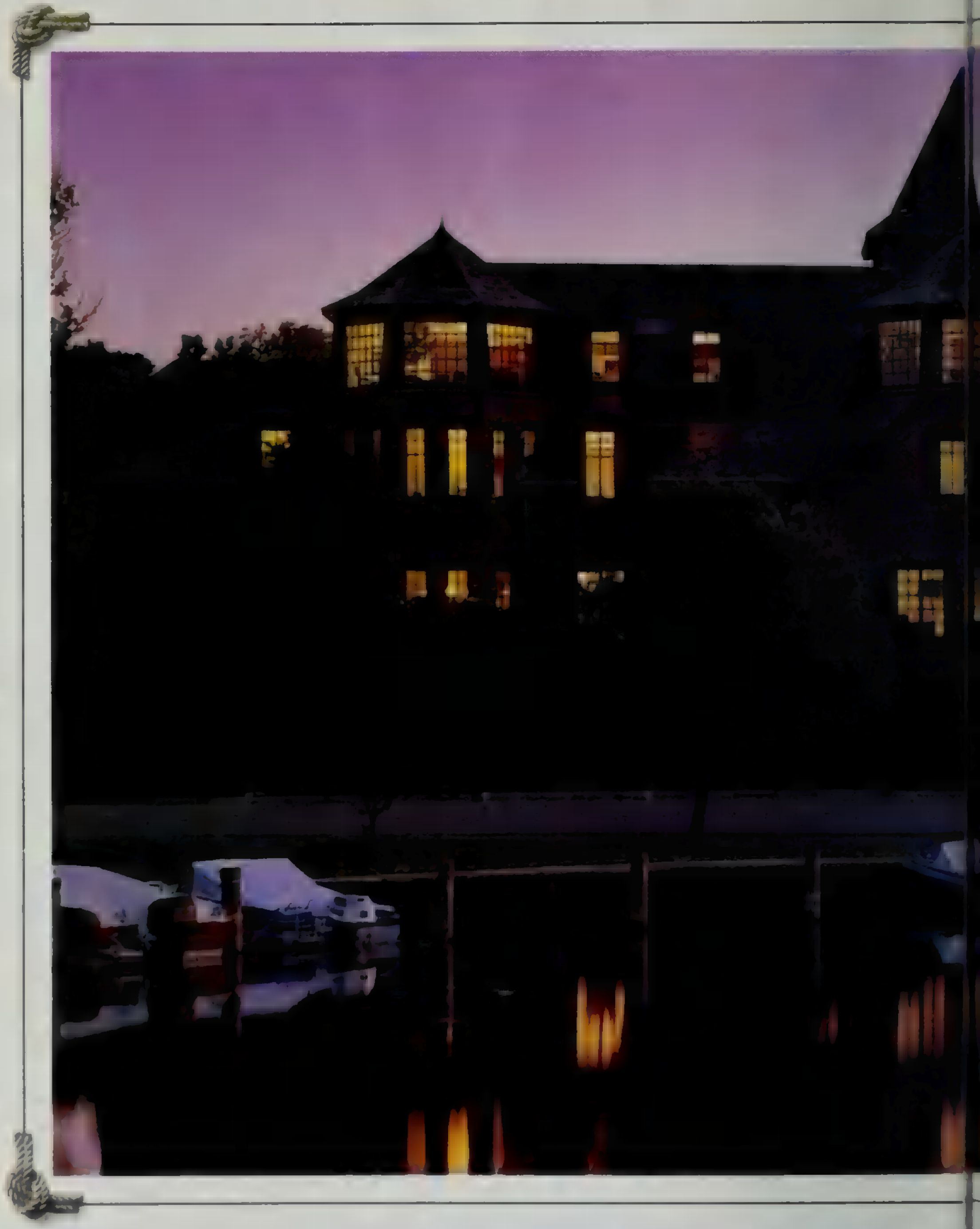

It looks less like a bank and more like an English country manor. But the charm of the Investors Savings Bank belies the challenges its design and construction presented. Particularly to Marvin Windows and Doors.

For one thing, fast-track construction scheduling was necessary due to constantly evolving design constraints. For another, it wasn't until thermal efficiency, condensation resistance and aesthetics were factored in that wood was chosen over aluminum. Consequently, Marvin wasn't selected for the job until construction was underway, making manufacturing and delivery deadlines extremely tight.

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Letters

More on Moore

I was saddened by the news that Charles Moore passed away in December. Working with Charles on the University of Washington Chemistry building, I found him to be full of good humor and perceptive ideas. He was always willing to share the design process with the entire team (both consultants and clients), rather than be domineering. He left behind a wonderful legacy of fresh approaches to design. Charles Moore's projects and the books he wrote will continue to provide inspiration for many years.

Why, then did you use such a negative tone for your obituary in the January issue [RECORD, January 1994, page 11]? You said, "Moore, despite his AIA 1991 Gold Medal and four AIA honor awards, was less known to the public than more outgoing practitioners such as (three are named)." I fail to see what naming these other men adds to the obituary. Why not be more positive and say, "Moore received the AIA 1991 Gold Medal and four AIA honor awards, for (name the projects)." And is it really necessary to mention that overeating and underexercising caused his untimely death? Lots of people don't even live to be 68. Surely you could find something better about his life to focus on.
Cynthia Richardson
President-elect
AIA Seattle Chapter

In your Charles Moore obit your last sentence, "Moore ate well and exercised little, and the combination taxed his heart and in the end cut off a career that had a long way to go," seems perhaps to have much more to do with your mindset than Moore's life style. This kind of media judgment is questionable at best; if established as a norm it could lead to some interesting commentary. I can imagine the nature of comment about death caused by auto accident, emphysema, liver disease, AIDS, etc.

Perhaps the best example though would have been an addition to your Norman Jaffee "remembered" on page 13 of the same issue, where you could have noted that at age 61, Norman died prematurely, as a consequence of exercise.
Saunder Schaevitz, Architect
Montvale, New Jersey

Readers Richardson and Schaevitz miss the point. Charles Moore was all of the things they point out—compassionate, perceptive, a superlative designer, one who embraced the client and user in all his design projects. But the cause of truth isn't served by denying what is after all a fact—that he was a self-effacing man, whose influence was felt chiefly through students, clients, users and other architects, rather than through the high-profile channels of the public media. As for his careless lifestyle, other publications beside RECORD have stressed this point. It was part of his character. We need a balanced picture of this brilliant man, not a distorted image—Ed.

Afrocentric Architecture

Some African-American architects may not understand Mr. Olufemi Majekodunmi's apathy for the so-called Afrocentric architecture (RECORD, January 1994, page 16), but I do share his views for the following reason: I am from Senegal (West Africa), but I went to a school of architecture here and became licensed in

(Continued on page 15)

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March 2-May 29
"Cities of Artificial Excavation–The Work of Peter Eisenman" exhibition, Canadian Center for Architecture, Montreal. 514/939-7020.

March 13-July 31
"Holocaust Memorials in History" exhibition, The Jewish Museum, New York City. 212/423-3271.

March 7-April 11
"In the Public Domain: The Social Purpose of Architecture" lecture series, Parsons School of Design, New York City. 212/229-8955.

March 8-9
"Buildings New York" exhibition and trade show, New York Hilton. 612/378-6502.

March 13-15
National Coalition for the Homeless conference, Washington, D. C. 202/673-4037.

March 17-19
"Architecture and Legitimacy" conference, Netherlands Architecture Institute, Rotterdam. 31-(0)10-436-6975.

March 21
City of West Hollywood Urban Design conference on "The Future: Function or Fantasy?" 310/854-7495.

March 24-25
"Retrofit Design and Construction" conference, Stanford University, San Francisco. 415/725-2308.

June 15-July 15
"Design Legacies: A Tribute to Architects and Designers who have died of AIDS." Exhibition of their work at Gallery 91, SoHo, New York City; slide preview April 19, National Arts Club, Gramercy Park South. 212/969-8773.

Competition
▪ Benedictus Awards competition for professional architects; student competition is on expanding the Bauhaus at Weimar. Entry deadline, April 22. 202/393-5247.

ARCHITECTURAL RECORD

3?

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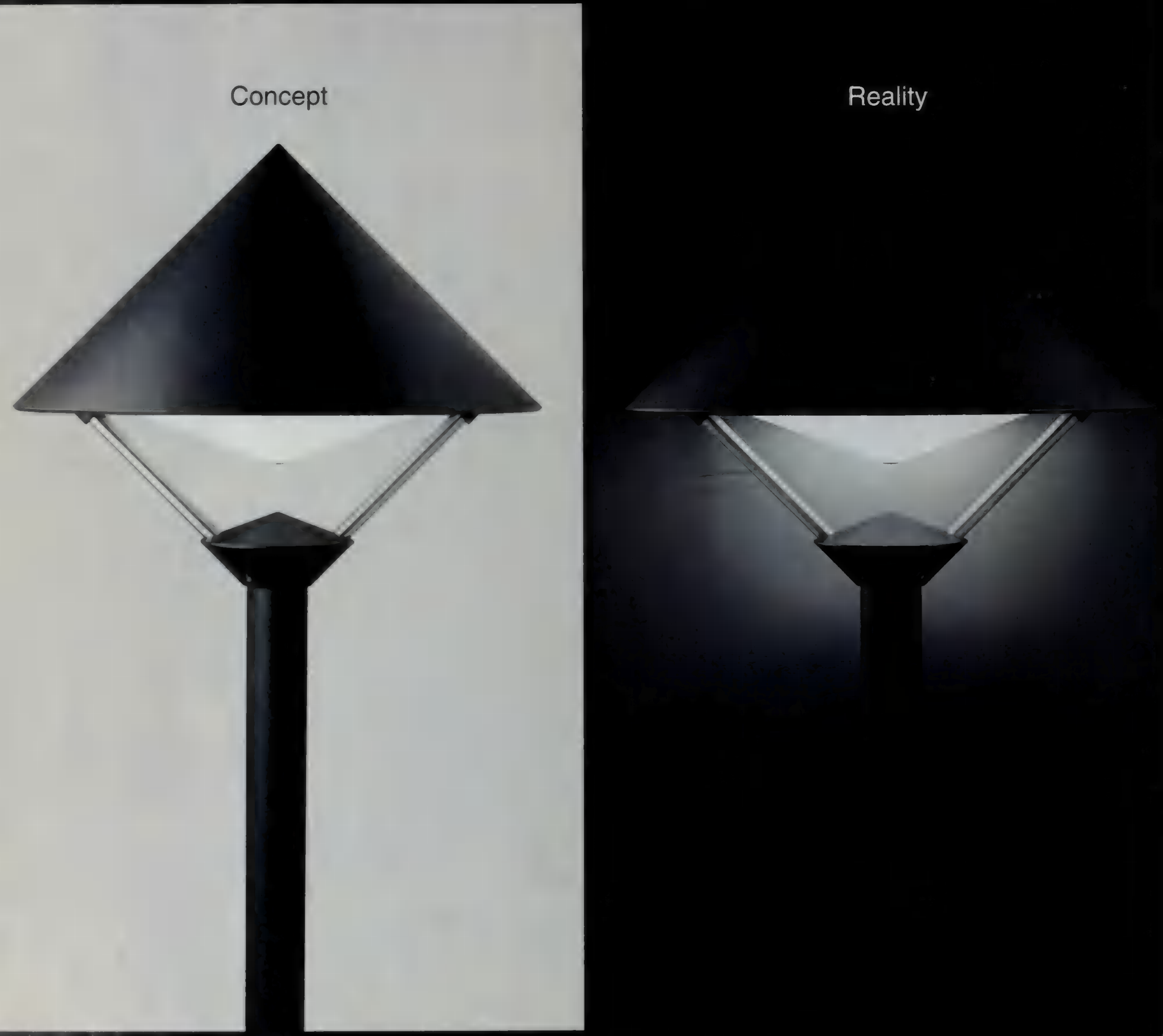

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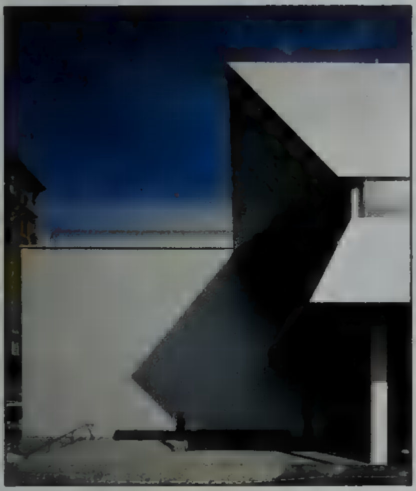
© Richard Barnes photo

The Center for the Arts Yerba Buena Gardens Galleries and Forum is Japanese architect Fumihiko Maki's first American building.

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RECORD's annual Houses issue presents houses by architects Antoine Predock, Simon Ungers, Carlos Jimenez, Carlos Zapata, Fernau/Hartman, Lubowicki Lanier, Machado Silvetti, and Joan Hallberg.

Also in April

- Portfolio of residential window details.
- Software reviews.
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ARCHITECTURAL RECORD Editorial

It's No Time to Scuttle the Brooks Law

Once again the substance of the Brooks Law, a procurement law that obliges federal agencies to select A/Es on the basis of their qualifications and not price, is being questioned in Congress (U.S. embassies are not covered, but the State Department follows Brooks procedures). The country, staggering under a 12-figure deficit, needs to watch its public expenditures and get the most value out of each dollar. But it's hard to drum up much enthusiasm for the savings to be had by squeezing architects' fees, the supposed benefit of price-based selection.

For one thing, the relationship of the A/E's fee to lifetime cost of a building is like comparing a baseball to the planet Jupiter. Once you count in the cost of land, financing, operation, maintenance, depreciation and, yes, the salaries paid to the building's users, the architect's fee is so small as to defy measurement. Even commercial clients, for whom first costs are a big factor, must recognize the small impact on costs of the A/E's fee. Yet there are those in Congress who want to save on A/E fees by buying design on the same basis as pencils or combat boots.

Viewing these services as commodities ignores the differences among firms—differences in building type specialization, design innovation, schedule-and-budget management track record, location, size, timely availability of key people. All these attributes carry a price tag, but their valuation must be assessed feature by feature by the client. Only after reducing the number of firms to those of roughly equal qualifications should price enter, and even then one firm is usually more qualified than the others.

There are exceptions. Champions of design-build, whether public or private, are within their rights under this project-delivery method to choose the architect-contractor team mainly on price. That's because the client is buying a product along with professional services, and on top of that is also selling risk, a condition largely absent when hiring an A/E on traditional lines. Some federal agencies, such as the GSA and the U. S. Postal Service, use or plan to use design-build. Indeed, some architects are taking the lead by pairing up with contractors.

Forecasts vary widely as to whether (or when) design-build will predominate the selection process. Today it is used only on a minority of federal projects, with most A/Es still selected for traditional design-bid-build project delivery. Congressional staffers have promised to consult with the AIA and hold hearings before any move to de-fang Brooks, says AIA's government affairs liaison Albert Eisenberg. But the signals are mixed, and architects must be watchful.

What's An Architect Worth?

"What's an architect worth?" That's a very good question, as well as the title of an article series beginning on page 32 of this issue. For the topic is tightly linked to the architect-selection process. It's the valuation that society places on the architect and, ultimately, determines how much that architect makes. Supply and demand, architects' mythical (and much overemphasized) nonchalance about money matters, and the intervention of construction managers and other outside disciplines, all depress architects' earnings. Yet architects can indeed, as we have often urged on this page, and as you'll find documented in an upbeat article starting on page 28, muster an arsenal of services that clients value highly, and will pay for generously. That's good; but don't tamper with Brooks. *Stephen A. Kliment*

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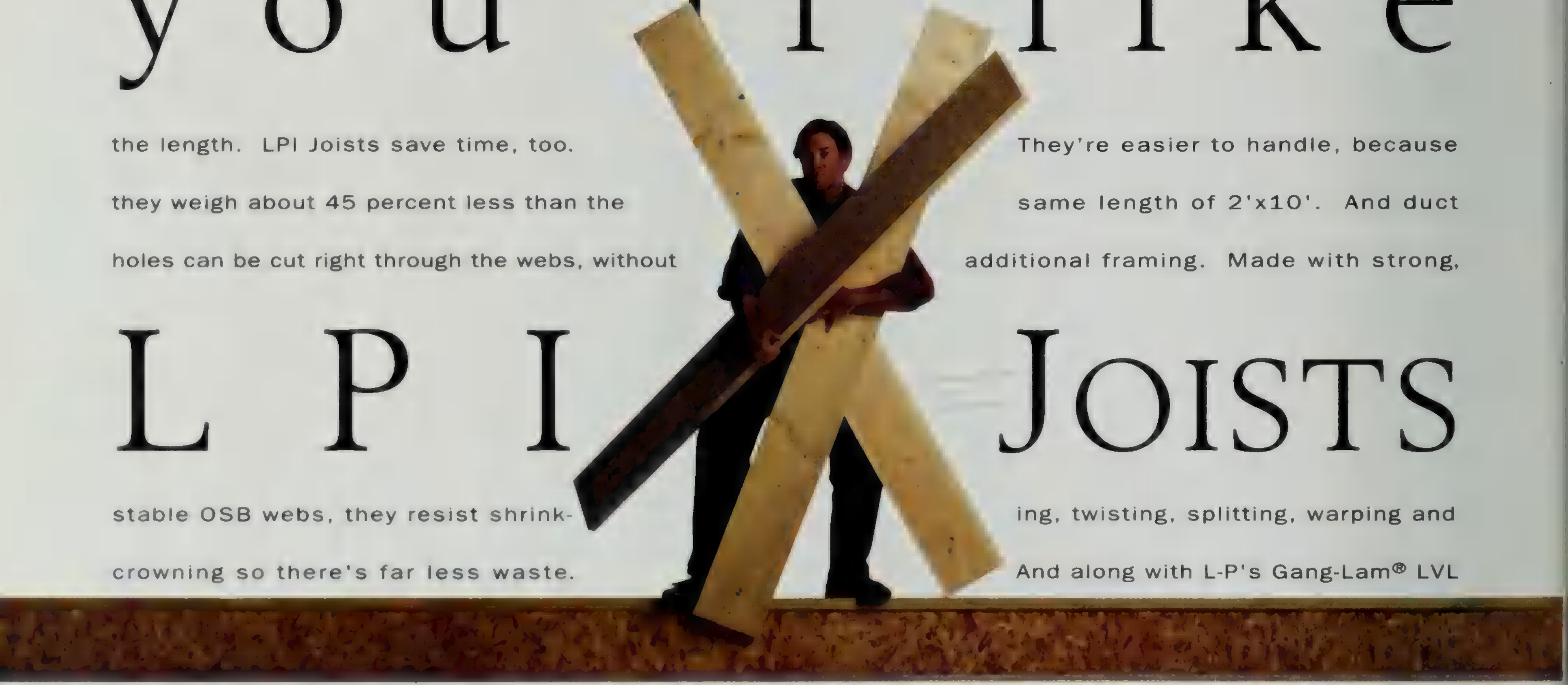

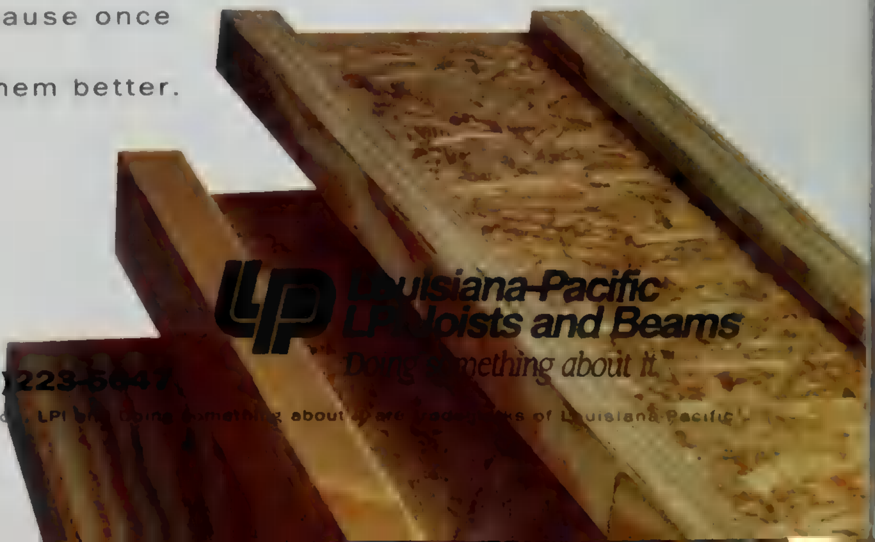

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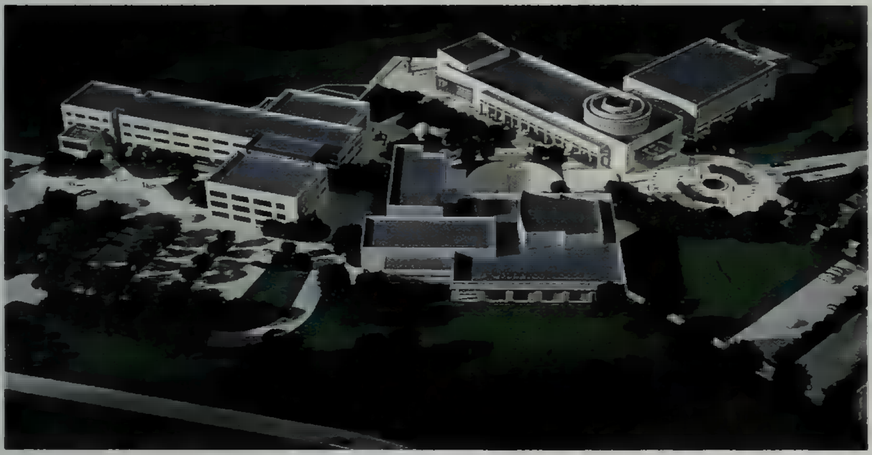
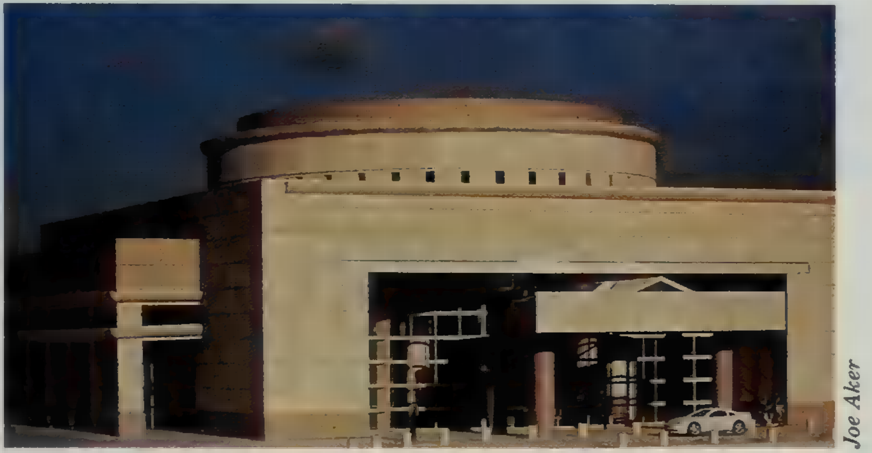
Texas

Presidential Library to Portray the Life and Times of President George Bush



Chuck Marshall

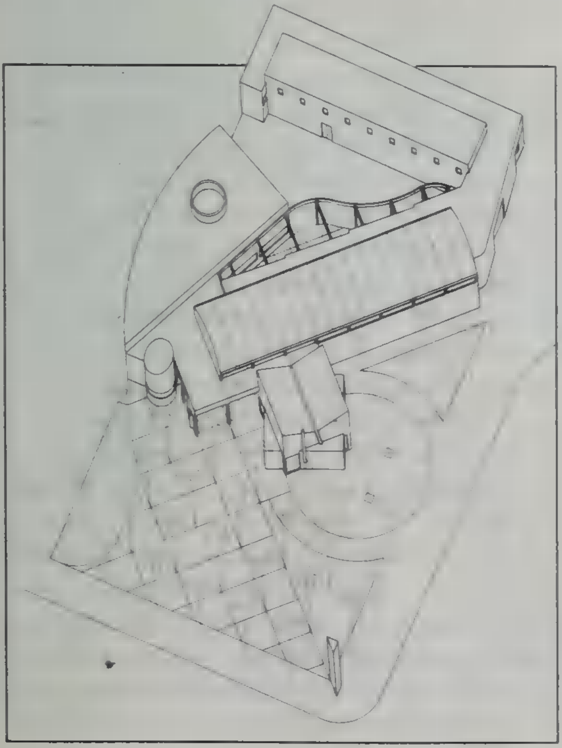


Joe Aker

The George Bush Presidential Library (above, right) at Texas A&M will be part of a three-structure complex (above, left) designed by CRSS to include the George Bush School of Government and Public Service, and, inserted between library and school, a shared-use building with two auditoria, a banquet room, an international-studies center and quarters for the Bushes. As in all presidential libraries, there is no actual "library"; the granite and Texas limestone structure contains a museum—a three-story-high open space the length of a football field—and a three-floor wing for archives and administration. A glass wall where the archives intersect the museum will make visitors aware of scholars at work. A drum-encased hexagonal oculus caps the entry rotunda. ■

Florida

New Home for Unconventional Museum



A new 4,000-sq-ft museum has been designed for the North Miami Center of Contemporary Art (COCA) by Gwathmey Siegel & Associates Architects in association with Gelabert & Navia Architects. Defined by four articulated, interconnected elements that frame a 9,000-sq-ft sculpture courtyard, the facility will occupy a current parking lot between the City Hall in North Miami and the site of a proposed new police headquarters. A winged-roof teaching studio will jut out into a reflecting pool surrounded by a 28-ft grid of 40-ft-high palm trees. The facility, to be constructed from ground-faced concrete block, steel, galvanized corrugated metal panels, and stucco, will house an existing 10-year-old museum that features Florida artists and prides itself on non-conventional large-scale installations, performance, and multi-discipline collaborations. ■

Washington, D. C.

Palazzo on the Potomac

Piero Sartogo's design for the new Italian Chancery cuts a diagonal path through the square four-story hammered marble building to create a view from Embassy Row on Massachusetts Avenue through the chancery to Rock Creek Park. Inside the solid palazzo form, the path widens into a cylindrical central courtyard with a transparent lens hung midway between the ground and the copper roof. Scheduled completion is 1996. ■

Accent on Architecture

Foster: One Building Can Transform City

"I have always believed that architecture is a social art—a necessity and not a luxury. . . Social concern is one of the most powerful driving forces of architecture." This was a key theme of Sir Norman Foster's speech as he accepted the AIA Gold Medal from National Endowment for the Arts chairwoman Jane Alexander at the Accent on Architecture ceremonies in Washington, D. C., February 1.

Foster expanded this theme later in an interview with RECORD. "With one building you can transform a city," he said, citing the town of Nîmes, where Foster's recently opened Carré d'Art [RECORD, October 1993, pages 62-71] is already succeeding in reversing a pattern of seedy streets, vandalism, and social protest through an array of measures made up of the physical re-creation of streets and the rebuilding of civic pride through the scheduling of civic festivals satisfying the city's three constituencies—younger people, the elderly, and visitors.

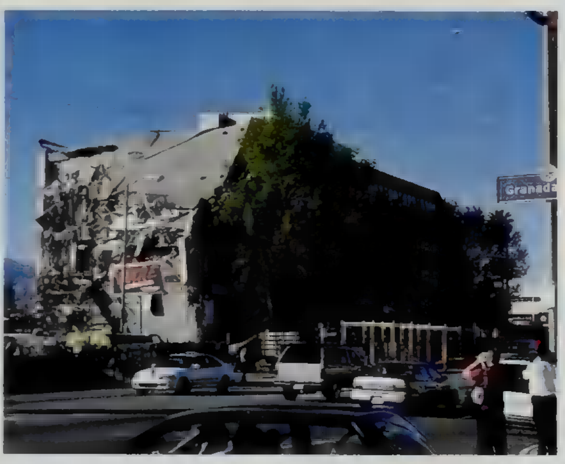
Influencing product design

Asked about the architect's role in shaping products, Foster told RECORD of the "tremendous opportunity" architects have to influence manufacturers on every project. "Architects have a fixed product budget to work with. They can go to the maufacturer and say: 'We don't have any extra money to spend but we think this [product] could perform better.' They should attempt to understand the manufacturer's production methods. . . They must capitalize on the fact that the producer is very open to working with the designer who respects and understands the production process, and out of this often come new products. Out of our Willis Faber building came a floor used on countless buildings.

"Look at the typical makeup of a concrete floor," he adds. "You see a suspended ceiling with its suspension system; a lighting system with its suspension system; the duct system, the sprinkler system—both with their own suspension systems. You can get tremendous economy by looking at the interfaces of these products. If you as an architect can penetrate this smaller scale, there's a tremendous new field."
S.A.K.

Los Angeles

Earthquake Produces Costliest Disaster In City's History



Michael de Villiers

The January 17 earthquake hit worst near its epicenter in the San Fernando Valley suburb of Northridge, leaving some nearby areas relatively unscathed while severe damage occurred 15 miles southeast in Santa Monica and West Los Angeles.

Among larger buildings, concrete-frame garages, hospitals, university structures, and shopping centers fared worst: a 1991 precast-concrete garage at Cal State Northridge partially collapsed. Damage to older unreinforced masonry included collapsed parapets, church towers, and entire facades, mainly in Santa Monica and Hollywood. Brick chimneys and block walls lay toppled in neighborhoods all over the city. Near downtown LA, the Coliseum incurred major structural damage. UCLA's Royce Hall's Romanesque towers and Kerckhoff Hall's Gothic spires were harmed. Damage was superficial at Powell Library (currently being renovated under UCLA's sesmic-upgrade program) and at the Shrine Auditorium. In the north San Fernando Valley, exploding gas lines incinerated houses and mobile homes. Houses fell down hillsides in Sherman Oaks and Pacific Palisades.

Wood-frame buildings, like the one in Northridge where 16 died, caved in over weaker first-floor "soft stories." Most of these predated building-code changes requiring plywood shear walls. Bridges on four major freeways collapsed, and 150 schools were damaged. City officials worry about lost affordable housing and landlord abandonment of rent-controlled units; preservationists fear demolition of salvageable buildings. *Michael de Villiers*

New York City

Competition Winners' Designs Honor African Ancestors

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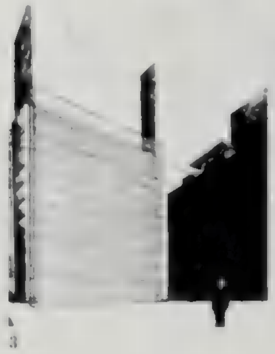

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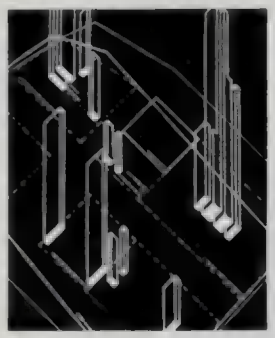

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A competition for designs to commemorate the African Burial Ground has resulted in four first-place winners: C. Neville of New York City (4); J. Timothy Richard, Katharine and Robert Brendle of Portland, Oregon (1); Lester Y. Yuen and Nana D. Last of Cambridge, Massachusetts (3); and Karen Bermann of Ames, Iowa, and Jeanine Centuori of Kent, Ohio (2). Located in Manhattan's civic center, the burial ground dates to 1712, when New York still was a major slave-holding center that banned Africans from burial in church cemeteries. The discovery of over 400 bodies during 1991 excavations forced the redesign of a $276 million federal office building and ignited controversy over whether the bones were ancestral remains or scientific specimens. Many of the 151 competition entries will be on view at the Municipal Art Society until April 20. ■

Design

Briefs

Winners

- Kevin Roche has been elected president of the American Academy of Arts and Letters.
- The AIA has presented the 1994 Thomas Jefferson Award for Public Architecture to architects M. J. Brodie of RTKL, and Richard Dattner; and to Mayor Joseph P. Riley, Jr., Hon. AIA, of Charleston, South Carolina, cofounder of the National Endowment for the Arts' Mayors' Institute for City Design.
- The James Marston Fitch Charitable Trust has awarded grants to Frazier Associates to study the impact of design guidelines on historic districts; to Linda Laird to do photo study of Midwestern grain elevators; and to the Medicine Wheel Coalition for Sacred Sites to fund travel to meetings.
- Terrence M. McDermott succeeds James P. Cramer as executive vice president/chief executive officer of the American Institute of Architects. McDermott comes from Cahners Publishing, where he was a publishing executive with building and design magazines.

Budget Axes Police Academy

To help close its budget gap, New York City is scrapping plans for a $247-million police academy/community center. Its Ellerbe Beckett/Michael Fieldman design had been chosen through international competition. The existing academy will be renovated.

Levittown Founder Dies at 86

William J. Levitt, the building contractor who devised the prototypical moderate-cost suburban housing development that changed the face of America, died in January two weeks short of his 87th birthday. His first Levittown, begun in 1947 on New York's Long Island, grew within four years to 17,000 identical 800-sq-ft two-bedroom houses. Designed by his brother Alfred Levitt, they used prefabricated components and assembly-line methods. Another 120,000 homes followed in Maryland, New Jersey and Pennsylvania. Reviled by some at the time as "cracker boxes" in a depressingly uniform landscape, they were welcomed by urban workers as an escape from cold-water flats and doubled-up living conditions. Levittowns and their imitators quickly sprang up outside most U. S. cities and became a major root of the nuclear family, the baby boom, suburban sprawl, and the withering away of the traditional city. Over time, the houses have been altered beyond recognition, but current residents say the original Levitt components require the least repairs. ■

Paris

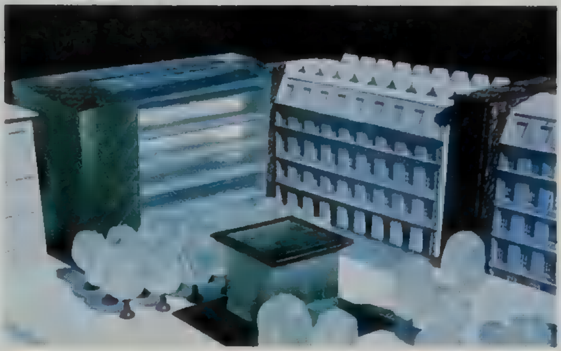
Après les Grands Projéts

The last word is not yet in on Paris' ambitious program of *Grands Projéts.* The once-contested Pyramid now has an inverted partner, part of the Grand Louvre's I. M. Pei-designed commercial center. The four open-book towers of the Library of France (2), by Dominique Perrault, are up, albeit with extensive design changes. No longer transparent, they will be lined with adjustable wood shutters to protect the books. The giant podium has been scaled down, and the entries have been oriented to Metro stops. Neighboring apartment blocks are just beginning as part of the immense Seine Rive Gauche plan to create life around the isolated library and the river front, today blocked by train tracks. This is the next wave of Paris architecture: scaled down, focused on housing, culture and the city.

Across the Seine, Frank Gehry's new American Center is up and scheduled to open in May. The walled-in-park site of the old Center on Boulevard Raspail will become home to the Fondation Cartier (3), a transparent/reflective box by Jean Nouvel housing a 26-ft-high ground-floor exhibition space surrounded by sliding glass panels, open to the trees, sculptures, and the city. Nouvel is also co-winner with Rem Koolhaas of a competition for a library and restoration of the Sorbonne's Jussieu campus; on hold, the project would create a pedestrian corridor behind Nouvel's Institut du Monde Arabe.

Further departures from monumental grandstand architecture to a shared urban stage include Philippe Starck and Luc Arsene-Henry's redesign of the Ecole des Arts Decoratifs (1) and Mario Botta's Evry Cathedral (4), a sliced 120-ft-diameter cylinder designed as a "House of Man" topped by a crown of trees, scheduled to open Easter 1995. Where Botta seeks a place of serenity in the heart of a modern new town, Starck creates a translucent-green two-way filter between city and student. His filter, like Botta's, aims to transmit the positive energy of the city while blocking the negative. Where the *Grands Projéts* embraced transparency, new projects reflect a more layered, dense, and introspective Paris.
Claire Downey

Journalist Claire Downey lives in Paris.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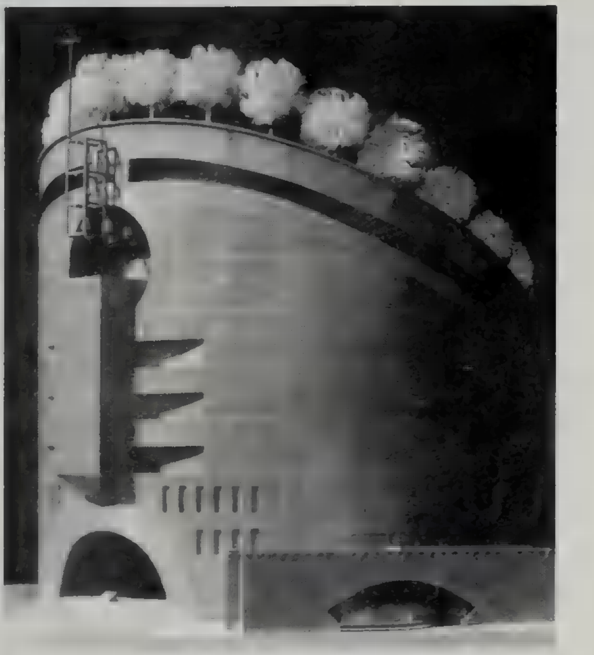
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Letters

(Continued from page 4)

Florida where I have my private practice now; I would not know how to design in an Afrocentric mode if I tried.

Sure, the African-American architects' longing for a connection with Africa is understandable and legitimate. However, architecture is commonly a multiple function of climatic, economic, social, and cultural conditions, involving "the act of making places for ritual use" (in the words of the late Spiro Kostof). To transpose to the United States bodies of architecture from Africa, where rituals are different, would only deepen the illusion of an identity crisis of nobody's making but our own.

In fact, the challenge to any architect anywhere is to make good architecture which, while climatically, socially and economically on the mark, is conscious of its [potential impact] outside its general confines of ethnicity and regionalism. If we can meet that challenge, Afrocentric architecture will be of little value to us.

Cheikh T. Sylla
President
SYLLA
Architects/Planners/Engineers
Tampa, Florida

More Credits

Your recent article on the Los Angeles Convention Center was admirable in summarizing the special challenges posed by the project, and comprehensive in all respects but one. It is important, I think, to credit the special contributions of Thomas Baker, Associate Partner/Design and Robert Milburn, Senior Associate Management at Pei Cobb Freed & Partners as it was largely due to their daily efforts that the building materialized as it did.

James Ingo Freed
Partner-in-Charge/Design
New York City

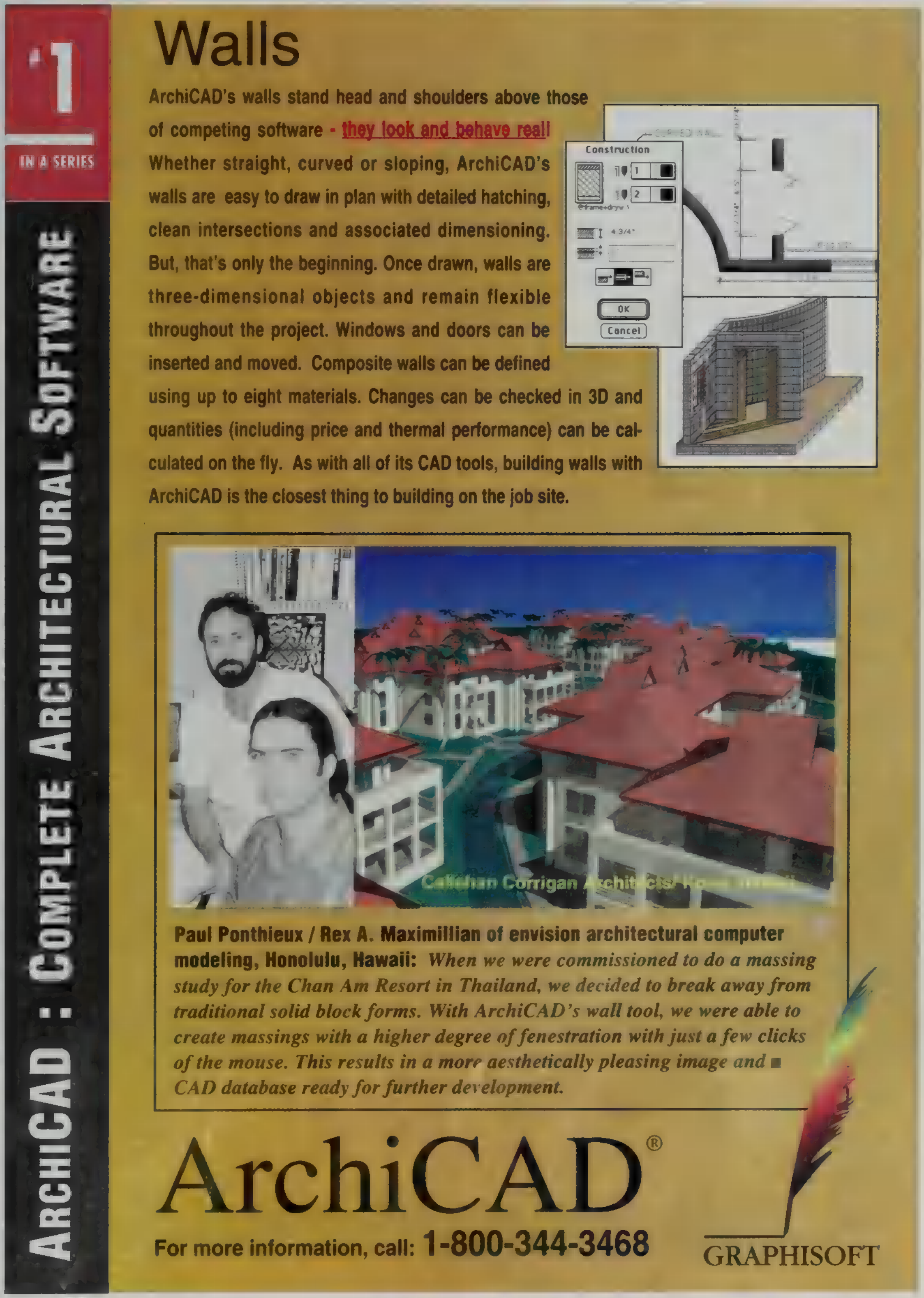
Olmsted Redux

In regard to Suzanne Stephens' "For the Record: Schuyler at the 1893 World's Fair" [RECORD, June, 1993, page 36], Frederick Law Olmsted and Henry Codman did not "landscape" the World's Columbian Exposition. Frederick Law Olmsted and Henry Codman, consulting landscape architects, were hired by the World's Columbian Commission to examine and evaluate several possible site locations. Along with Daniel Burnham and John Root, consulting architects, they harmoniously and successfully collaborated to persuade the commission on the Olmsted-Codman recommended site and to complete the adopted master site plan which was based upon the original scheme prepared by Olmsted; they also generated detailed site development plans for the exposition grounds.

This unjust writing unfairly perpetuates the misunderstanding that landscape architects only "landscape" a project.

John Geiger
Landscape Architect
Decatur, Georgia

Suzanne Stephens replies:
I should have been clearer about the site selection, planning, and development roles of Olmsted and Codman at the 1893 exposition. I had no intention of being "unjust" or "unfair" in referring to their achievements as "landscaping." I gather from your tone that is a derogatory term.



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Modernism: The Battles and the Glories

No Place Like Utopia: Modern Architecture and the Company We Kept, *by Peter Blake. New York: Knopf, 1993, 347 pages, $28.*

Reviewed by Felix Drury

Imagine yourself slouched in a Barcelona chair in the down-lighting of a steel-and-glass house, listening to one of the apostles of Modern architecture tell it as it was. These days the religiosity of the Modern Movement, its definition of newness, its sense of mission have been forgotten or scoffed at. Its manifestos—like Corbu's *Modulor* or Giedion's *Space, Time and Architecture*—have been replaced. It is time for Peter Blake to remind us of battles fought and glories achieved and of those who did them, to validate, in his words, the efforts "of young architects who, like myself, came out of World War II... determined to change the world, nothing less."

Blake tells this story in *No Place Like Utopia*, an engaging and clever monolog that ranges from plain reportage to inside gossip on most of the stars of Modern architecture and art. A theme of the book, he says, is "telling the truth" with the emphasis on personal friendship, which pretty well covers the field because Blake was, by his own account, "close to most of the players."

Like Modern architecture itself, Blake's family was expelled from Germany by the Nazis. Relocated to England, Peter found himself poor and in a Quaker school with a social agenda. These experiences set the values on which Blake based his career, and which are at the root of his disgust with what he sees as the corruption of American architecture under Postmodernism.

Blake began his career in London, as an office boy for Serge Chermayeff. We learn that the elegant Chermayeff had won the world tango competition in 1927. It is this kind of tale that runs the course of the book. Relocated to New York, Blake plugged himself into the architectural scene by working at the *Architectural Forum* and hanging out in Greenwich Village.

In 1940 he went off to study architecture at the University of Pennsylvania, where he met Lou Kahn, the planner Willo von Moltke, and, of all people, Bertrand Russell. World War II intervened and Blake was off to Europe as a combat intelligence officer.

Out of the army, Blake went on a cities survey for the *Forum*, stopping first in Chicago, where he had a long conversation with Mies and found a "boundlessly optimistic" Bucky Fuller living in a trailer in a parking lot. Then came the offer to become the head of the Department of Architecture and Industrial Design at the Museum of Modern Art. Blake was tickled to get the job, but found himself in conflict with director Alfred Barr, who saw architecture as an "art," while Blake replied "architecture is not primarily an art at all, but a discipline that is expected to provide housing, workshops, places to teach and learn and heal in."

Blake returned to the *Forum*, first as associate editor, then as managing editor. "We felt... that the *Architectural Forum* should be the voice for a new generation of young architects like ourselves... The *Forum*... stood for four things: a new architecture, a new kind of urbanism, a new building technology, and a new set of social and political priorities..." According to Blake, the *Forum* was clearly superior to the other, "mindless" U. S. architecture magazines.

Blake sandwiched in three other careers: his practice (largely with Julian Neski), of which he is rather self-effacing; his writings, most notably *The Master Builders* (1960), *God's Own Junkyard* (1964), and *Form Follows Fiasco* (1977); and his administration of two schools of architecture.

Throughout *No Place Like Utopia*, Blake shares with us his thoughts on those responsible for the development of Modern art and architecture in America. He writes, for example, of Frank Lloyd Wright: "behind this ludicrous facade, this monumental arrogance, this overbearing ignorance, there was a talent simply unequalled in this century, and in much of the architecture of the past." Of Philip Johnson, Blake says, "He could be arrogant, insulting, cutting, bitchy, devastatingly nasty... but never boring." Of Kahn's famous line about a "wall wanting to be a wall," he says it's academic gobbledygook. Of Paul Rudolph, he speaks of "a staggering, incorruptible talent."

Of the enemy, the Postmodernists, Blake mentions only one architect by name—Robert Venturi, who he calls a "serious and thoughtful critic of the Modern movement." Venturi's idea that Main Street is almost all right is, Blake says, a pessimistic vision, accepting of mediocrity and schlock. In the world according to Blake, Postmodernism is just the latest example of American cultural inferiority, to say nothing of greed.

This rambling monolog is so richly textured, so engagingly spoken that we can forgive the stories that are repeated four or five times. Peter Blake has come to the defense of Modernism well armed and bravely. ■

Felix Drury is an architect in Connecticut.

Ben Schnall photo

Blake (right) designed a show for Jackson Pollock (left) in 1949.

Great Streets, *by Allan B. Jacobs. Cambridge: MIT Press, 1993, 330 pages, $50.*
The Next American Metropolis: Ecology, Community, and the American Dream, *by Peter Calthorpe. New York: Princeton Architectural Press, 1993, 176 pages, $25 (paper).*
American Town Plans: A Comparative Time Line, *by Keller Easterling. New York: Princeton Architectural Press, 1993, 120 pages, $20 (paper).*

Reviewed by Herb McLaughlin

Civitas or community—along with the planning and architectural devices that promote it—is of vital interest to our profession. We live and practice in a society that is increasingly fragmented and disorganized both socially and physically. The old civic model of church, school, library, and town hall surrounding a town square has been supplanted by the tawdry sleazescapes of what author Joel Garreau calls "edge city" and what I refer to as "slopopolis." Restoring clarity and order to our chaotic suburban settlements—and saving, if we can, some of the older ones—should be one of our highest priorities.

The three books reviewed here address these issues. The best, by far, is *Great Streets.* Looking through it, the reader is treated to great sketches and plans and excellent text on the importance of streets in the life of cities. The cumulative effect is to make one want to rush to the airport and head for Bath, Barcelona, or Bologna to experience the best streets firsthand. The book examines exactly what its title says it will. It describes streets in depth and with great insight. It analyzes the factors that make them work or not work. Most of the specific insights found in this book are not surprising, but taken together the collection of observations makes the reader think about the various ways streets can function.

One hopes that Jacobs will extend his focus and analysis in the future to the larger issue of creating civitas in modern America. Excellent streets—boulevards, alleys, mews, crescents, and even canals—certainly help, but they are not enough. The country needs large-scale planning and governmental action. How soon can you get that book out on the shelves, Allan?

In *The Next American Metropolis*, Peter Calthorpe outlines many of the key factors that have led to the chaotic development of modern towns and suburbs. His excellent text offers some useful advice about radically reducing the amount of subdivision land wasted on streets (many of which are so wide they seem to separate rather than connect people), while also providing useful guidelines on redesigning these streets.

Calthorpe focuses much of his book on transit-oriented suburban developments, in which residential clusters are within 2,000-foot walks from small retail and transit centers. This is a nice concept, but unrealistic. Modern suburbanites want a single-family house on a fifth of an acre and want it so badly that they will commute by car (and car only) as much as two hours to get it. They want to shop at the gigantic discount stores that are starting to dominate American retailing, two of which require an area the size of an entire transit-oriented development.

Instead of pages of the familiar transit talk, the book might have devoted more text to government solutions—decreasing and concentrating retail zoning, sharing retail tax revenues, creating greenbelts, and such.

American Town Plans is a small book and it deserves to be. Its introduction is laden with sophomoric statements such as "Suburbia does not want to have a history," and "There are certainly rich and poor examples of the town, the poorest being driven by almost unalloyed speculative motives which are attended by their own factions."

Most of the book is devoted to a presentation of various town plans. This certainly is a worthwhile endeavor. However, it is substantially lessened in value by the absence of facts on patterns of development, on density, and so forth. Nor does a lack of photographs and detailed discussions of the plans help the book. ■

Herb McLaughlin is a principal of Kaplan/McLaughlin/Diaz.

Luis Barragán: The Architecture of Light, Color, and Form, *by Armando Salas Portugal. New York: Rizzoli, 1992, 168 pages, $45.*

Reviewed by Naomi R. Pollock

Looking at *Luis Barragán: The Architecture of Light, Color, and Form*, one wonders if it is about architecture or photography? This is a difficult question to answer because this book is as much a chronicle of Armando Salas Portugal's photographs as a monograph of the buildings designed by one of Mexico's greatest architects, Pritzker Prize recipient Luis Barragán (1902-1988).

During the 40 years that the two worked together, Barragán's buildings influenced the photographer whose pictures, in turn, stimulated the architect and helped his work become more widely known. Says graphic designer Massimo Vignelli in an opening essay, "The dynamic interrelation between the work of these two great artists is such that one suspects reciprocal inspiration."

Trained as a civil engineer, Barragán was a self-taught architect. Throughout his career he focused on residential work, starting with single-family houses and moving on to housing complexes built on land purchased with business partners. As both designer and developer, Barragán was able to realize his architecture in full. Though impressed by European buildings—from the Alhambra to International Style monuments—the greatest influences on his work were the ranches, villages, and convents of his native Mexico.

The book examines several of Barragán's most important works—such as El Pedregal, a residential development on 865 acres of desert land, his own home built in Mexico City in 1947, and one of his most spectacular projects, the San Cristobal Stable, Pools and House, completed in 1968.

In addition to the three projects described above, all of the architect's major commissions are well documented. Text and drawings provide detailed information, but it is Salas Portugal's photographs that dazzle the eye and preserve Barragán's vision in all its glory. ■

Briefly Noted

Alvaro Siza: Works & Projects 1954-1992, *edited by José Paulo dos Santos. Barcelona: Gustavo Gili, 1994, 312 pages, $65 (paper).*
Winner of the 1992 Pritzker Prize and a favorite of a small band of architectural cognoscenti, Portuguese architect Alvaro Siza has not been widely published in America. This beautifully produced monograph changes all that and serves as an excellent introduction to Siza's deceptively simple, poetic architecture that includes housing projects, public swimming pools, schools, and private residences.

Architects on Architecture: New Directions in America, *by Paul Heyer. New York: Van Nostrand Reinhold, 1993, 416 pages, $30 (paper).*
A reprint of the classic 1966 survey of American architects, this book provides a fascinating snapshot of Modernism at the peak of its cockiness, right before Venturi and company started yanking at its foundations.

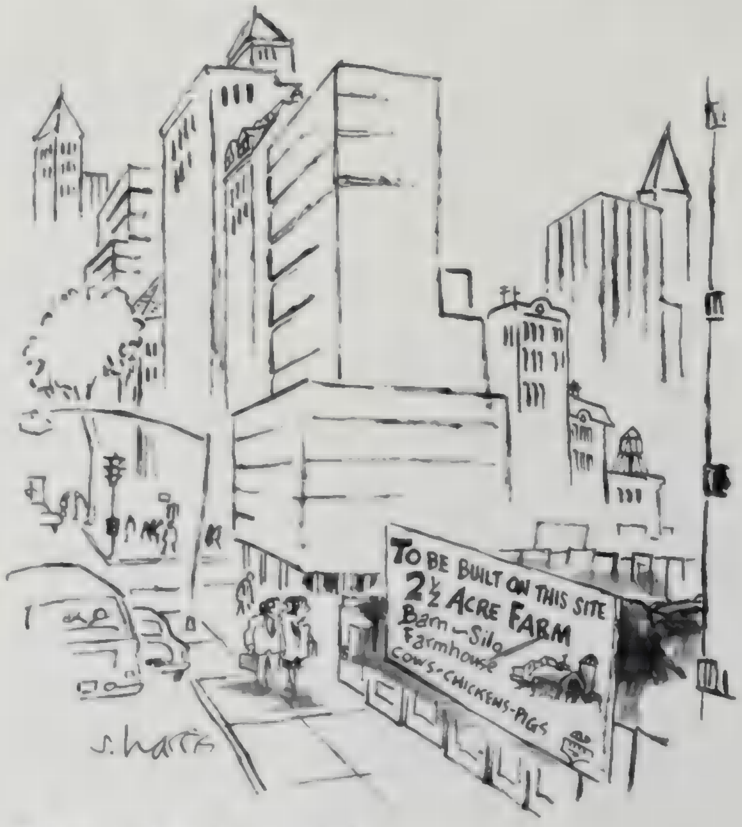
Viva Las Vegas: After-Hours Architecture, *by Alan Hess. San Francisco: Chronicle Books, 1993, 128 pages, $19 (paper).*
This lively and colorful book picks up where Venturi, Scott Brown, and Izenour's groundbreaking *Learning from Las Vegas* left off, and indeed begins with a short foreword by the three Philadelphia architects. Illustrated with vintage postcards and photographs, as well as new images, the book works as both a history and a thoughtful analysis of the Vegas phenonmenon.

Pump and Circumstance: Glory Days of the Gas Station, *by John Margolies. Boston: Little, Brown, 1993, 130 pages, $30.*
Chock-full of snappy old photographs, picture postcards, and oil company propaganda—as well as Margolies's own color photos—this entertaining work is the author's latest ode to popular American culture. The book includes old road maps, oil company signs, drawings of old gas pumps, and a breezy text loaded with arcane facts.

Architecture Shapes, Architecture Counts, Architecture Colors, *by Michael J. Crosbie and Steve Rosenthal. Washington, D.C.: Preservation Press, 1993, 18 pages, $7 each.*
This delightful set of three 6-in. by 6-in. books gives young people from the age of six or seven up a sense for shapes, numbers, and colors. Instead of associating these concepts with rather cute objects such as oranges and lilacs, the authors connect them with elements of architecture including domes, windows, porches, brick walls, and colonnades. The great merit of the set is its simplicity and its impact as a teaching tool, supported by Rosenthal's photographs and Viviane Silverman's design. *S. A. K.*

Color in the Office: Design Trends from 1950-1990 and Beyond, *by Sara O. Marberry. New York: Van Nostrand Reinhold, 1994, 125 pages, $50.*
A handsomely produced guide to the changing ways of office design, this book looks at furniture and technology, as well as color.

Drawn for ARCHITECTURAL RECORD by Sidney Harris



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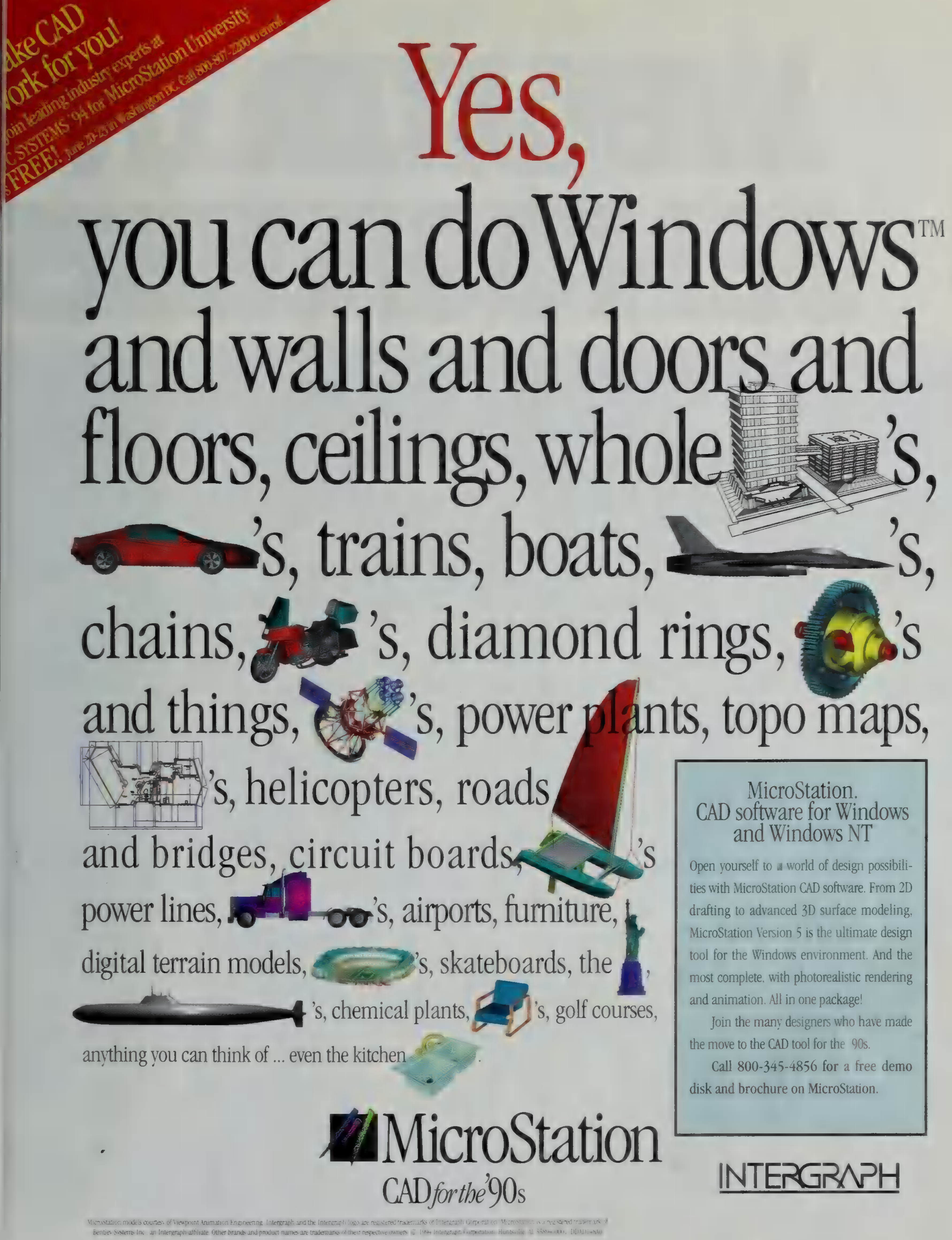

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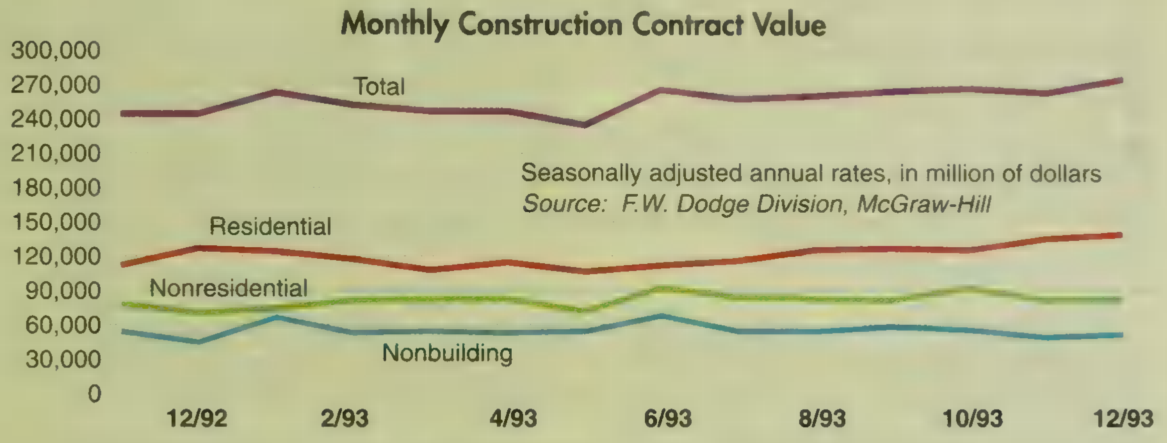
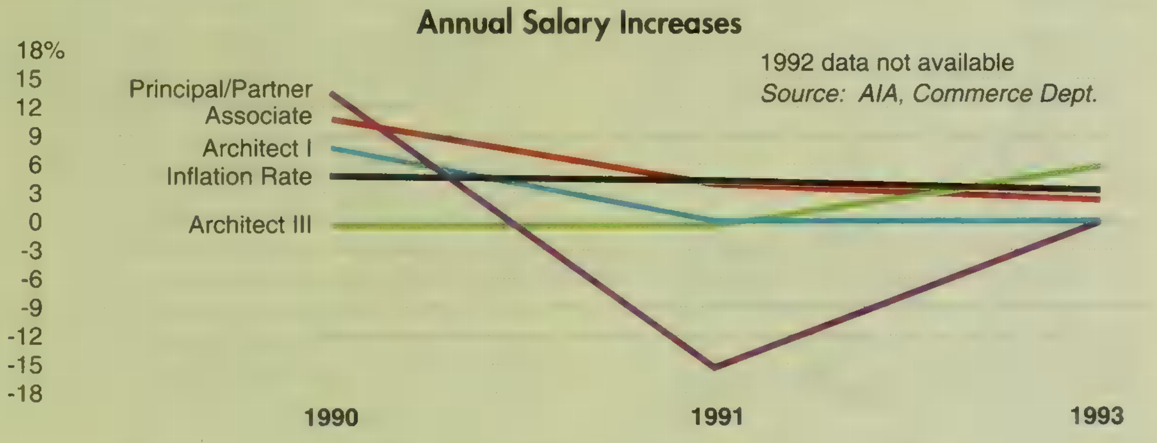
Indicators

1993 upturn led by houses
For 1993, F. W. Dodge shows essentially flat activity in non-residential construction contracts (though a small uptick late in the year in commercial work is especially welcome) and non-building (which includes highways and other public works). Led by single-family housing, 1993 building volume was up some 5 percent over 1992, rising from a total of $197 billion to $206 billion. The chart total includes non-building construction, which was virtually unchanged—rising $1 billion. ■


Monthly Construction Contract Value

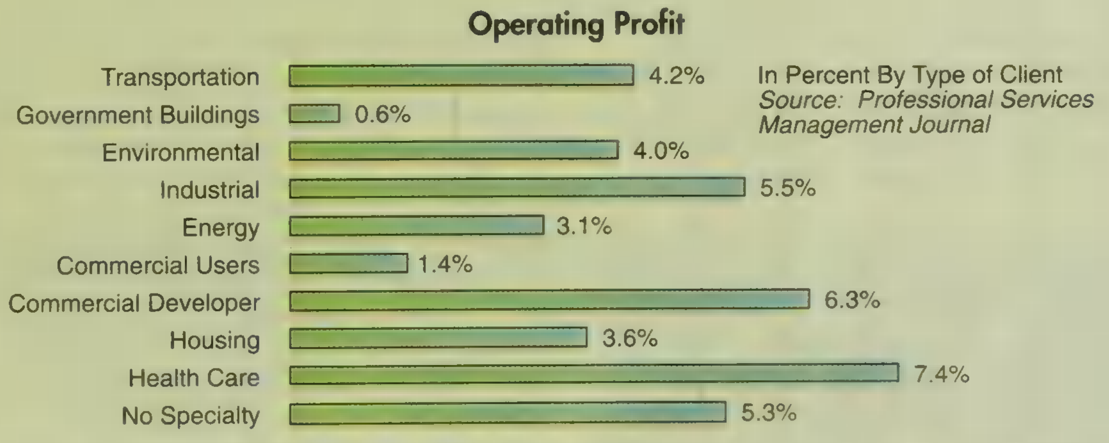
Seasonally adjusted annual rates, in million of dollars
Source: F.W. Dodge Division, McGraw-Hill

Salaries versus inflation
Salary surveys typically measure year-to-year changes in compensation, and usually show at least modest gains. When charted as percent increases compared to inflation, however, the grim toll of the construction recession becomes evident. Even as inflation moderated, most architects fell behind. Principals saw the largest drops, but architects with the least experience (I and III) had lower gains in the late 1980s. For more on salaries, see pages 32-35. ■


Annual Salary Increases

1992 data not available
Source: AIA, Commerce Dept.

Looking to health-care
Clearly, those architectural firms specializing in health-care make the most profit. Those that could find a commercial developer, given the lean times in that field, did next best. What of experts who say specialization pays? Firms reporting "no specialty" did better than six out of nine categories of specialist firms. Environmental and industrial work—fields dominated by engineers—are in the middle. Woe to the firms seeking government work: they might have done better with a savings bond. ■


Operating Profit

In Percent By Type of Client
Source: Professional Services Management Journal

The Profession This Month

To specialize or to generalize? Experts in two stories this month differ.

- **It's Still a Design Firm—Or Is It?** As clients restructure, so do architects. Firms offering non-traditional services may lead in reinventing the profession. Their message: offer more. *Page 28*
- **What's an Architect Worth?** Three experts assess what it would take to improve staff compensation. Their message: specialize. *Page 32*
- **Freeing the Information Logjam:** Dennis Neeley, a long-term participant in the computerization of design, offers a vision of a bright, electronic future. RECORD plays devil's advocate. *Page 36*
- **Rx 4 RFPS:** Reviews of two packages that streamline proposal writing. *Page 38*
- **Products:** Lighting designed by the Master, Frank Lloyd Wright. *Page 40*

Housing

New Alliance Will Push Research

A new industry alliance hopes to speed innovative technologies to market housing. IBACOS, which stands for Integrated Building and Construction Solutions, is a consortium of Ryland Homes of Columbia, Md.; GE Plastics, Pittsfield, Mass.; MASCO Corporation of Detroit; U. S. Gypsum, Chicago; and architect Burt Hill Kosar Rittelmann Associates of Pittsburgh.

Besides examining the forces changing the industry, IBACOS will also research new building technologies. At its Innovation Center in Pittsburgh, IBACOS has constructed full-sized sections of a prototype house shell, kitchen, and bath. One new technology is a roof system developed at MIT that replaces conventional trusses with a combined rafter-and-sheathing system made of engineered wood (below).

Other technologies on IBACOS's agenda include using recycled computer cases for roofing shingles and combining computers with virtual reality to design and speed up the construction process for new homes. Under a grant from the Department of Energy, IBACOS has built two full-sized houses in a Pittsburgh suburb—one traditional, the other incorporating innovations—for comparison. They should be ready for tours this spring. By 1995, IBACOS plans to build a community of homes using these new technologies. *Randy Quinn, Pittsburgh*

IBACOS's roof system mockup

Office Practice

When AIDS Comes to the Office

By Peter D. Slatin

With AIDS, it's easy to think "it won't happen here," and "we'll handle it just like any other personnel problem,"—until AIDS strikes the office and brings its uniquely tragic fears, emotions, and consequences. Unfortunately, just as it is costlier to install a security system after a burglary, formulating a policy for dealing with employees who have contracted the HIV virus that causes AIDS will cost more in both financial and emotional terms if it is done only after the situation arises.

AIDS remains several steps ahead of efforts to come to grips with it. The numbers themselves quickly put an end to presumptions about where or whom the disease can strike: As of last September, according to the Gay Men's Health Crisis, a non-profit AIDS advocacy group, 340,000 cases of AIDS had been reported nationwide; 205,000 had died of the disease. The fastest-rising category: heterosexual women. Teenagers comprise 16 percent of those infected with the HIV virus. In 26 cities across the country, AIDS had become the leading cause of death for men between the ages of 25 and 44.

Compassion and running a business

The fears and questions are more immediate when AIDS comes to the office. Since most people get AIDS in the prime of life, the sense of rage and the recognition of promise unfulfilled can be debilitating. The reaction of colleagues may range from compassion to scorn. The enormity of the issues calls for a before-the-fact policy. "The challenge to firms is to strike a balance between humanitarian outreach and running a business," says Cheri Van Over, office administrator at Butler Rogers Baskett (BRB) and past president of the New York City chapter of the Society of Architectural Administrators. That means giving attention to a blend of issues, from health-care benefits and client needs to emotional support for an affected employee as well as for the rest of the staff.

Healthcare and disability benefits

Most firms don't need a special policy on AIDS in terms of insurance or disability. A person with AIDS may affect health-coverage costs, depending on the company. Some states allow companies to "punish" policyholders by dropping them when AIDS (or other high-cost) claims are made. AIDS is covered under the Americans with Disabilities Act. "Our firm manual was in line with the ADA, so our attorney didn't feel a separate AIDS statement was necessary," says Van Over. "Any disability benefit must be applied across-the-board to all employees." ADA mandates that firms make "reasonable accommodation" for disabled persons.

Coping with the emotional side

Mark Prendergast, marketing director for A/E Einhorn Yaffe Prescott, and founder of Build a Belief, an AIDS advocacy group working in the design industry, says only 20 percent of businesses nationwide have any kind of policy on HIV and AIDS. Increasingly, though, businesses seek guidance to deal with the fear and anxiety AIDS holds. Some have used counseling, but this may be too costly for most design firms. Butler Rogers Baskett held a daylong seminar with Laura Long, a specialist with the Employer Consulting Service of Gay Men's Health Crisis. (Many major cities have AIDS organizations that offer similar services—often led by volunteers—which can cost little.)

Along with providing background on AIDS transmission and treatment, Long discussed basic situations that arise with HIV-positive employees:

- *Disclosure and confidentiality.* If an infected employee tells a manager but asks for confidentiality, managers are legally required to respect the request. "The issue of disclosure versus non-disclosure gets very difficult," says Long. "You can't keep the fact that someone's not at work confidential, or that they've suffered significant weight loss."

Advice from experts like Long can help managers balance the rights of the person with AIDS with the needs of employees and clients. On the other hand, no one should assume that a person who has HIV will soon sicken. Many show no AIDS symptoms for years. And people diagnosed with AIDS are living longer, and staying productive longer.

- *Assigning workloads and informing clients.* Clients have no legal (or other) right to know if someone on staff has AIDS; they just need their job done as expected. If they ask that a person who has AIDS be written into their contract, Long suggests that you say that you will include that person as part of a team. (You'll avoid disputes if the person can't complete the project.)

- *Job performance and progressive illness.* Eventually, says Long, "people with AIDS can't do their job; it's not a static condition. At some point a person is really no longer a 'qualified individual' in legal terms. Most managers have a difficult time telling someone they have to go on disability." This is one of the conversations managers need to prepare for, she says.
- *Overreacting.* "Most firms and people are genuinely compassionate," Long says. "Problems arise when people are overly compassionate. That's just as discriminatory as not being compassionate." Drawing that line is in large measure a subjective judgment, but it's important for managers to know that the line must be drawn.

Charles Baskett, a partner in BRB, is glad he brought Long in: "It was important for the understanding of the partners and the staff, and it tells a story of how we feel," says Baskett. "You have to know what you're talking about as an employer. We're concerned, confused, and sometimes we simply don't know what to do. The big answer that I have now is knowing where to seek help."

One solace is volunteering. In New York, Build a Belief rallied 250 people from design firms, organizations, and schools, and raised more than $33,000 in last year's AIDS walk. Underscoring the impact of AIDS on the design professions, the group was the third largest in the march. *Peter D. Slatin*

Further information

- Business Responds to AIDS/Centers for Disease Control, BRTA Manager's Kit, $25. CDC National AIDS Clearinghouse, BRTA Resource Service, P. O. Box 6002, Rockville, Md. 20849-5231
- National Leadership Coalition on AIDS. Workplace Resource Center, 1730 M Street, Suite 905, Washington, D. C. 20036 (202/429-0930).
- American Red Cross Workplace HIV/AIDS program. Contact local chapters or the ARC's Office of HIV/AIDS Education, 1709 New York Avenue, N. W., Washington, D. C. 20006 (202/434-4074). ■

Washington Notes

A Look Ahead at '94 Federal Initiatives

Deficit-reduction commitments by Congress and the President are reflected in the Administration's FY 1995 budget proposal, which means most of what is new is tinkering around the edges. A dramatic addition is $8.6 billion proposed for aid to victims of the Los Angeles earthquake. If the full amount is approved it would be a disaster-aid record.

Housing and urban development

HUD has released $755.1 million to 26 public housing authorities to rehabilitate the most distressed projects—an unusually large amount. Long-criticized design standards have been relaxed. This may permit a better level of design than has been seen in years. [For more on housing policy, see RECORD, January 1994, pages 26-29]. The FY 1995 word, however, is "cut": new public housing is slashed by 75 percent, public-housing modernization by 18 percent, and new elderly public housing by 66 percent.

Transportation

Transportation appropriations in 1993 fell short of authorization. Still, transit capital funding rose a whopping 21 percent. Likely beneficiaries: the Bay Area, Washington, New York. The tilt to transit may increase as clean-air rules put non-complying urban areas in danger of losing highway funds. And the new budget proposes a 69 percent increase in capital grants to transit systems. Congress has failed to approve funding of $1.7 billion in airport grants, but local authorities are drawing more from passenger facilities charges (PFCs).

Health care

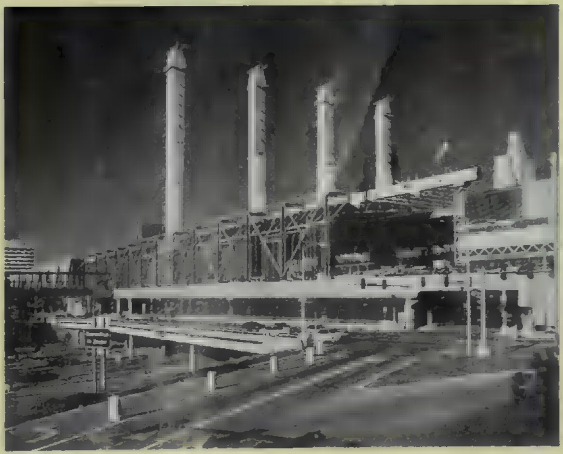
Some expected design and construction in health care to go on hold while details of the President's health plan are reworked in Congress. The consensus of experts, however, is that health-care spending will climb, primarily because the trend toward more ambulatory care and fewer hospital beds will continue no matter what form health-care legislation ultimately takes. If the plan serves those currently underserved, new facilities will be needed, which brightens the outlook for the next few years.

Other initiatives

With 130 military facilities scheduled for closure, the transfer of lands to local government may offer important local design and development opportunities [RECORD, October 1993, pages 96-107], though the AIA is concerned over lack of a defined planning process. Budget winners in FY 1995 include the National Institute of Standards and Technology and prison construction (assuming likely passage of a crime bill). With much GSA work still under review by budget cutters, courthouse and office-building construction programs may be compromised. *Lynn Nesmith and James S. Russell*

Kansas City

Cable Staying A Convention Center



The only way the Bartle Hall Convention Center could readily expand was over a freeway and flanking access ramps. A/E HNTB designed four pylons that rise 280 feet from a reconfigured median and suspend the entire 200,000-sq-ft addition through cable stays attached to 3-ft by 5-ft roof-stiffening box girders. A steel box-girder system at 30 ft centers supports the floor's 300-lb.live loads. Mechanical systems are accommodated in an interstitial floor below the main level. (The photo was taken before enclosure last summer.) *J. S. R.*

It's Still a Design Firm—Or Is It?

By Norman Kaderlan

It was a dream assignment—the creation of five new theme parks, each of which will enable visitors to experience the earth as it was during the time of the dinosaurs. Richard Buday, partner of Archimage in Houston, Texas, devised the concept, designed the parks, and supervised their construction. But rather than going to the parks, visitors to 3D Dinosaur Adventure will experience them on CD-ROM disks.

After practicing architecture for 30 years, Robert Odermatt became a design and development consultant. As owner and sole employee of The Odermatt Group in Orinda, Calif., he assists corporations and institutions in determining the best use for their land and facilities.

Glen Garrison targets other architects for his "integrated architectural management" consulting services. Drawing on 20 years of experience as a principal and project manager with major New York City architectural firms, he helps small- and medium-sized practices improve their design and production process.

Buday, Odermatt, and Garrison are among a growing number of architects who are pushing out the traditional envelope of architectural services—or even abandoning such services altogether. Their common conviction is that the process that is central to architecture—the design process—can be applied to a much larger set of problems and concerns. "We have expanded our definition to the extent that building design is only one subset of architecture," says Buday.

Another common thread, however, is the extent to which the shrinkage in the market for traditional services drove these principals to try something new. While some have concluded that the traditional market will not return to its former size, others see the pace and scope of business change as an opportunity. By reinventing themselves, they may be leading the way to a reinvention of the entire profession.

Designing virtual worlds

A five-person firm, Archimage did not set out to do computer imagery. Initially, it provided architectural renderings and animations for clients as an outgrowth of its CAD-based, building-design practice. Film producers and directors and corporate communications specialists began expressing interest in the firm's electronic-imaging abilities. As California's construction recession dragged on, Archimage saw a marketing opportunity, and in 1991 decided to pursue computer imagery as a strategic objective.

The decision paid off. Computer imaging now accounts for 80 percent of Archimage's annual income. The principal's architectural sensibilities and skills are highly valued. "The fact that we are architects and can create spaces and environments has gotten us jobs in preference to computer-animation firms," Buday asserts. Archimage has done a fundraising video for a new University of Texas engineering center, an animated "fly

Norman Kaderlan, Ph.D., is president of the Kaderlan Group, a management consultant firm based in Los Angeles that specializes in design practices.

From Soup to Nuts: The Smith Group

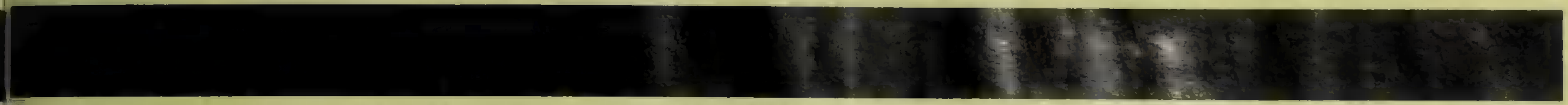
Smith Hinchman & Grylls Associates, Inc.
Architecture, Engineering, Planning, Detroit, Mich. (Offices in Phoenix; Washington; and Ann Arbor, Mich.)

Traditional Services:
- Schematic Design
- Design Development
- Construction Documents
- Bidding and Award
- Administrative Supervision
- Field Inspection

Other Services:
- Air and Water Quality Control Engineering
- Airport Planning and Design
- Appraisals from Building Plans
- Communication Systems Engineering
- Building Systems Evaluations
- Computer Graphics and Design
- Construction Management
- Conveying Systems Engineering
- Cost Estimating
- CPM-PERT Project Control
- Drainage and Hydrology Engineering
- Economic and Feasibility Studies
- Energy Audits
- Energy Conservation Studies
- Engineering Consultation and Special Investigations
- Environmental Assessments
- Environmental Impact Statements
- Facility Economics
- Forensic Engineering
- Facilties Programming and Management
- Furnishings Design
- Grant Applications Development
- Graphic Design
- Group Technology
- Industrial Engineering
- Interior Design
- Illumination Design
- Land-Use Studies
- Landscape Architecture and Urban Design
- Life-Cycle Cost Studies
- Marine Engineering
- Manufacturing Studies
- Master Planning
- Materials Handling Systems Design
- Medical Systems Operation Analyses
- Metropolitan Planning
- Operations and Maintenance Manuals
- Pre-Planning Consultation
- Preservation Architecture
- Process Piping Engineering
- Program Management Services
- Real Estate and Financial Consulting Services
- Regional Planning
- Requirement Studies
- Security Planning and Design
- Sewer and Water System Design
- Signage Design
- Site Analysis and Selection
- Site Engineering
- Soils Engineering
- Solar Energy Systems
- Space Planning
- Special Transportation Equipment Design
- Transportation Engineering
- Value Engineering
- Waste Management Studies
- Water Resource Management
- Wetland Delineation

Johnson, Johnson & Roy
Landscape architecture, urban design, civil engineering, environmental services, Ann Arbor, Mich. (Offices in Dallas; Chicago; Madison, Wis.)

- Aquatic Resource Services
- Biological Assessments
- Campus Planning
- Commercial and Office Development
- Community Participation
- Computer-Aided Design and Drafting
- Corridor Analysis
- Downtown Revitalization
- Environmental



Some firms are pushing the boundaries of traditional design services. Others have all but abandoned them. Time will tell whether they're the wave of the future or just making do.

through" of a fairy-tale castle for Walt Disney, and a digital "neighborhood" that Nintendo will use as a video-game backdrop. Being a pioneer in a new field also has allowed Archimage to escape architecture's traditional fee structure, and enter an arena where the market price has yet to be firmly established. Even as costs go down to reflect the economies of PC-based technology, Archimage still earns more per hour than it could receive for traditional services.

An owner's advisor

One of Odermatt's current clients is the government of Greece, for which he is evaluating a group of existing, government-owned resort properties that will be turned over to the private sector. "Design is only one element in the process of getting buildings built," Odermatt asserts. "I'm involved early in the process. By identifying what the client's needs are, I can have more influence on the shape of the physical environment than the building designer." He is helping the government establish the value and state of repair of the properties, and will also prepare a request for proposals. Odermatt has established a market niche that sets him apart from other design firms. He may assist owners in developing a scope of work, define the consultants that are needed, write an RFP, and assist in evaluating consultant responses. Indeed, he doesn't even call himself an architect because he doesn't want to be stereotyped. "Clients don't think architects help achieve their goals," says Odermatt. He sees himself as more respected and better compensated than he would be as a practicing architect.

An architect's architect

Garrison's extensive design and construction experience gives his firm an edge when design firms seek to improve their procedures. Architecture encompasses much more than design, Garrison feels, giving him the insights needed to compete with non-architect management consultants. "As an architect, clients see me coming from the inside rather than from the outside." Though Garrison refocused his firm to provide these services when the recession hit and the market for traditional design services dried up, he still feels he provides architectural services.

When clients reinvent themselves

The rapid pace of change in business has placed enormous pressures on facilities decision-makers: the universally flexibile facility hasn't been invented, and linear design-and-construction processes don't bring new facilities on-line fast enough. Clients often want a single entity to solve a variety of broad needs, which has created opportunities for large practices. Firms such as NBBJ, a 450-person architecture and interiors practice based in Seattle, offer a comprehensive range of "front-end" (prior to design) and post-occupancy services. Gensler and Associates, a multi-office, 650-person firm, now competes with management and real-estate consultants (page 31), and expects staff to develop relevant expertise—from reading business journals to obtaining MBAs.

Though already a diversified practice, Smith, Hinchman & Grylls realigned itself through a 1992 long-range planning effort. The firm concluded that a number of trends pointed to a declining demand for traditional architectural services, at least through the end of

Assessments
- Environmental Impact Statements
- Flood-Plain Analysis
- Golf-Course Design
- Historic Preservation Planning
- Land-Use Studies
- Marina/Harbor Design
- Master Planning
- Mixed-Use Development
- Natural Features Inventory
- New Town Planning
- Park Planning
- Permitting and Licensing Applications
- Plant Design
- Resort Planning
- Resource Conservation Management
- Road, Highway, and Street Planning
- Rooftop Plaza Design
- Shoreline Protection
- Site Structure Assessment
- Stormwater Management Plans
- Streetscape Development
- Technology Park Planning
- Threatened and Endangered Species Surveys
- Transportation and Pedestrian Studies
- Urban Design
- Utility Investigations
- Water-Quality Protection Plans
- Water Resource Management
- Waterfront Development
- Wetland Delineation
- Wetland Mitgation/Wetland Monitoring

Premise Associates, Inc.
Integrated Real Estate Strategies, Detroit, Mich.

- Market Analysis
- Feasibility analysis
- Real Estate Development Strategies
- Facility/Site Location
- Asset Management
- Economic Benefit and Impact Assessment
- Economic Development
- Development Structuring
- Soundness of Loan Portfolios
- Litigation Support

Moyer Associates, Inc.
Criminal Justice Planning and Design, Northbrook, Ill.

Terra Development Corporation, *Commercial and Residential development, Detroit, Mich.*

Terra Investments, Inc., *Commercial owner/manager, Detroit, Mich.*

Market conditions prompted Smith, Hinchman & Grylls to examine comprehensively how they could apply the firm's skills as architects to a broader range of client needs in facilities and real estate. According to CEO Arnold Mikon, this permits the firm to offer not only the vast number of services listed, but a strategic approach to renovations, additions, and new buildings.

the century: overcapacity in certain building types or changing modes of operation that allow some businesses to substantially reduce their space needs.

On the other hand, some clients wanted more effective management of their building assets, but lacked the necessary skills. Smith, Hinchman & Grylls began to apply its design ability to this broader range of client needs. The firm is now part of the The Smith Group, a holding company that includes firms providing environmental and land-planning services, economic analysis, and real-estate and development consulting services (previous pages). According to CEO Arnold Mikon, this helps avoid being labeled "just an architect," and gives the firm greater credibility in marketing non-traditional services.

At NBBJ, clients for traditional architectural services pulled the firm into non-traditional areas. "Our more sophisticated clients started asking questions that neither we nor they could answer," says partner David Hoedemaker: deciding whether to build new buildings or renovate old ones; determining the life cycle cost of various design alternatives; comparing one university's facilities to peer institutions. NBBJ added the research and planning capacity to respond.

For a new eye-care institute at Swedish Hospital in Seattle, the firm is evaluating the kinds of therapeutic and related tasks that could be included in the facility's program, which the firm will then write. NBBJ is examining current practices, workload, and trends in eye care. It will even analyze demographic trends. According to Don Audelman, a consultant who advises Swedish Hospital on its strategic plan, NBBJ was selected because they knew building design, facilities needs, and therapeutic strategies. The fact that NBBJ could develop the program and then design the building was also an important factor in the client's selection. "This isn't something that other, more specialized medical consultants could provide," he says.

Designing solutions to problems

These extended services are well within the purview of the architect, say those who provide them. "There's a lot more to what clients need than what we have traditionally sold," says Ken Bussard, of RDG Bussard Dikis in Des Moines, Iowa. Bussard recently created Foresight, a network of people and specialized firms that together can provide services ranging from strategic planning to facilities management. "This gives us the opportunity to take the architect's problem-solving methodology into other realms of the building world," he says. Robert Odermatt says that the underlying thought process remains the same—only the medium has changed. "I'm not doing anything different than what other architects do. I've just expanded my frame of reference from the building to the total package."

The realignment of these firms' services may prove merely opportunistic (they'll reverse course when times improve, critics say). Or they could be paving the way for the profession; only time will tell. At any rate, they've defined an alternative to the shrinking role that many see for architects in planning, design, and construction. ■

Reworking the Firm

Glen Garrison, Inc.
Integrated architectural management services, New York City

Management Planning:
- Office Structure and Practice Analysis
- Design and Production Improvement
- Procedures and Standards Handbook Development
- Financial, Fee, and Contract Analysis and Methods
- Office Management Plan Implementation

Project Management:
- RFP Management Plan, Proposal Preparation and Administration
- Special Project Liaison and Coordination for Joint Ventures
- Project Set-Up, Oversight, and Review
- Financial and Feasibility Status Reporting
- Owner/Project Team Project-Management Representation

Training and Instructional Programs:
- Project Management Methods
- Procedures and Standards Implementation
- Financial and Administrative Organization
- TQM Introduction

Quality Improvement Programming (QIP):
- Planning
- Strategy and Mentor Selection
- Implementation Coordination
- Sustaining Activity

Cyberspaces

Archimage
Computer-based design and visualization services, Houston

Architecture and Interiors:
- Architectural Design
- Space Programming and Analysis
- Site and Master Plannning
- Feasibility Studies
- Interior Design
- Space Planning
- Lease-Space Documentation
- Furniture Design
- Component Selection
- Exhibit Design

Graphics:
- Graphic Design
- Computer Illustration
- 2D and 3D Digital Animation
- Multimedia Design and Production
- Photorealistic Rendering
- Computer Graphics
- Computer Programming

Computer Imagery Services:
- Animatics
- Broadcast Video
- Corporation Communications
- Direct-Marketing Videos
- Exhibit Design
- Graphic Design
- Medical Illustration
- Packaging Design
- Sales Promotion
- Television Station Identity
- Architectural Modeling
- Business Presentations
- Courtroom Illustrations
- Engineering Visualization
- Focus-Group Research
- Industrial Design
- Multimedia Production
- Photo-Realistic Rendering
- Technical Illustration
- Training

As the scope of business changes, some practices see a chance to reinvent themselves, and redefine conventional design thinking.

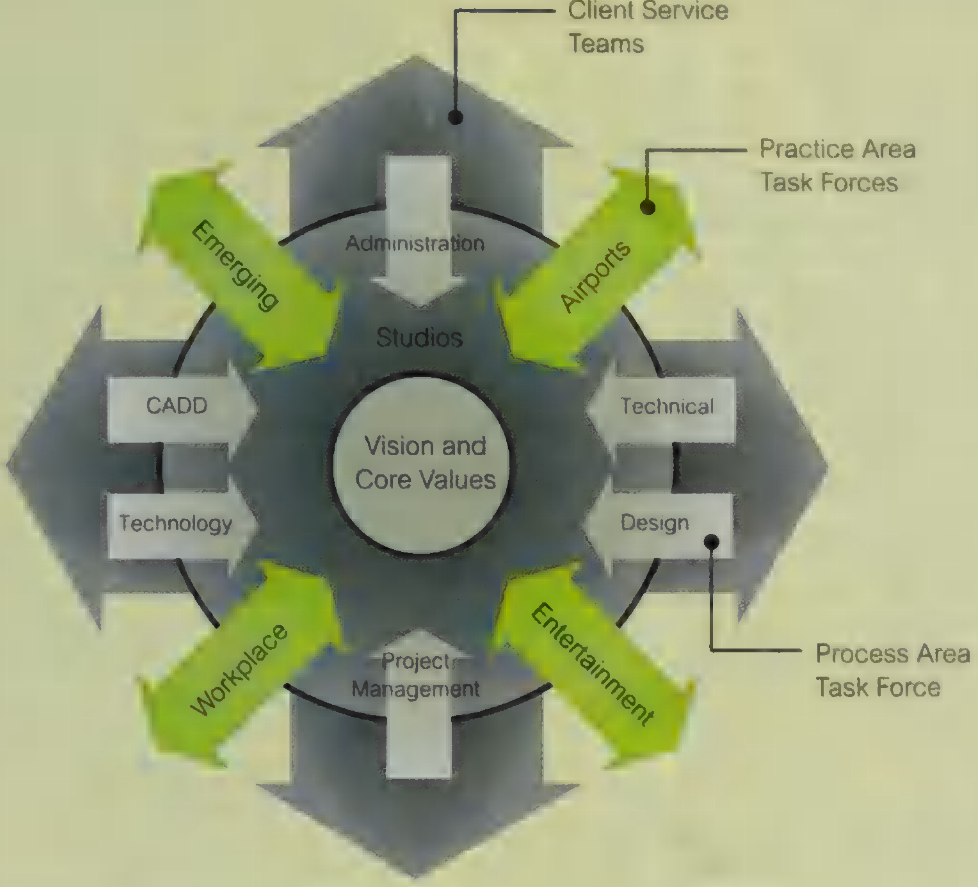
Strategic Design

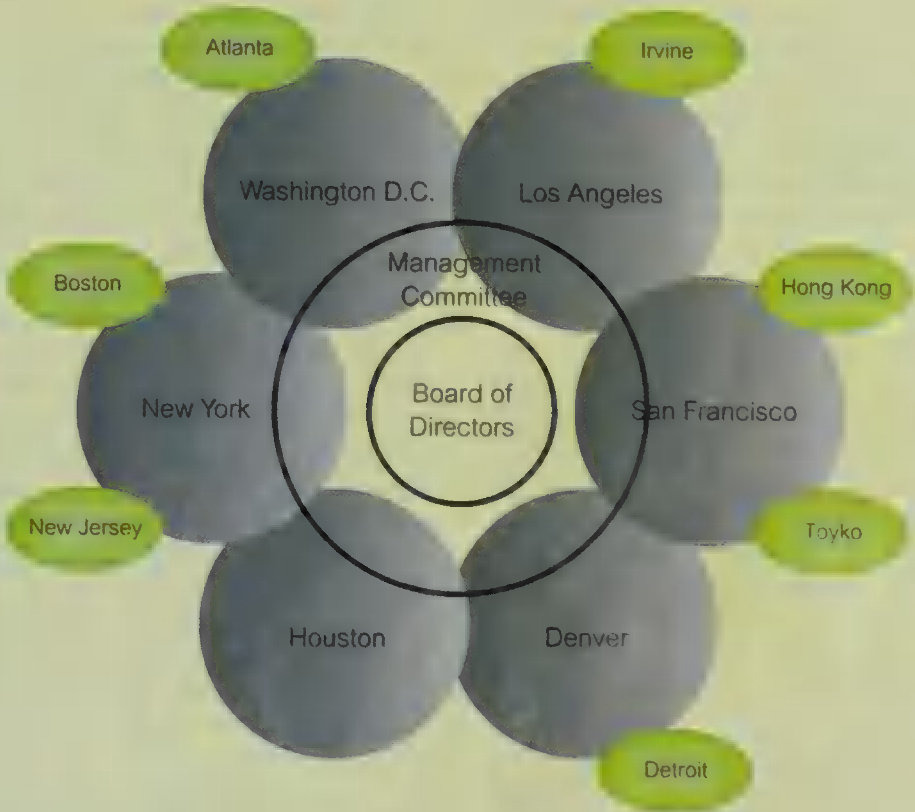
Once 95 percent of Gensler and Associates' work was traditional architecture and interior design for speculative office buildings; now it's less than 10 percent of the Los Angeles office's work. The firm is reinventing itself from top to bottom. In a few years one might well ask, is this a design firm? According to Ed Friedrichs, managing principal of Gensler's Los Angeles office, only 50 percent of the firm's work will be in traditional architectural services by 1998.

Consistent with the "customer-driven" culture many businesses have adopted, Gensler's new purpose is to provide any facilities-related service clients seek. Before proceeding with renovating their San Francisco headquarters, for example, the McKesson Corporation sought a firm that could act as "a business strategist as well as a designer," as James "Skip" Law, vice president of real estate, put it. The company asked Gensler to study which functions should remain in-house and which could be contracted out; to recommend ways to improve operational productivity, and to quantify the savings from each recommendation—not only in cost per square foot, but in operating costs.

To meet these challenges, Gensler carries projects out using Client Service Teams. Their mission is to enhance the performance of the client's enterprise even if no building commission results. Each office has Practice Area Task Forces that are specifically charged with keeping up on research and ploughing into new work what the firm has learned doing key project types. The Los Angeles office has four (chart top right). Process Area Task Forces also look inward, attempting to improve office processes.

Clients see traditional architectural services as a commodity, and fees are tied to market rates, asserts Ed Friedrichs. The hourly rate Gensler charges for non-traditional services are one and one half to twice their normal billing rate. Clients perceive a payback with non-traditional services akin to that of accountants and attorneys, and are willing to pay similar rates. *N. K.*





What's an Architect Worth?

This overview of current pay issues puts our experts' views in context.

By Katherine Kai-sun Chia

In the extended construction slump, the "market value" of an employee has had less to do with education, experience, and responsibility than with supply and demand. The latest AIA firm survey (below) shows almost no real salary movement since 1988. For both staff and principals, knowing the going rate is more important than ever in today's cut-throat fee environment. Salary surveys offer benchmarks, but caveats apply. In architecture, there is a very large number of very small firms, which often pay much less than average. Compensation can be much higher than average in certain cities and regions, and in firms requiring specialized skills. (Page 101 lists sources for the AIA and other compensation surveys.)

A return to bonuses?

Staff has come to expect bonuses as partial compensation for the long hours often required as deadlines near. Even steadily employed staff have seen bonuses disappear and raises deferred. Most salary surveys don't measure bonuses, but a 1993 survey of California architectural firms by Management Design found that approximately 30 percent of principals, 32 percent of management, and 43 percent of staff received bonuses between June 1992 and June 1993. The median bonus distribution ranged from 15 percent of base pay for principals to four percent for staff.

To keep staff motivated in an uncertain economy, employers in many industries are looking at alternative forms of compensation, including individual and team bonuses, compensatory time off, and profit-sharing plans. In California, Management Design found that 44 percent of firms surveyed have some form of performance-based additional compensation. Of these, 75 percent provide annual incentive or bonus pay, 20 percent offered cash profit sharing. A few offered commissions, team incentives, spot awards, or technical-achievement awards. Such incentive programs need to be spelled out. One staff member of Portland, Ore.-based Zimmer Gunsul Frasca said the firm's profit-sharing plan works well "because the percentages are explicitly outlined for us. There's no second guessing because the firm is very good about keeping us informed about our profit margin." According to ZGF managing partner Bob Packard, "Our profit-sharing/bonus plan includes everyone from the receptionists to the partners." The firm also awards discretionary additional bonuses to high-performing staff.

Small firms and job-changers have been affected by the rapidly rising cost of an important benefit, health insurance. For now, many firms have changed to lower-cost plans that offer fewer services, and higher co-payments and deductibles. Firms of five or fewer people often have trouble finding coverage, and it frequently costs much more than for larger groups.

Hourly versus salaried

Rather than using bonuses or profit sharing, Management Design's George Schrohe says 60 percent of reporting firms provide compensatory time off or overtime pay to salaried employees. (Compensatory time off is usually calculated by dividing the number of overtime hours by a factor to determine the additional paid days off.)

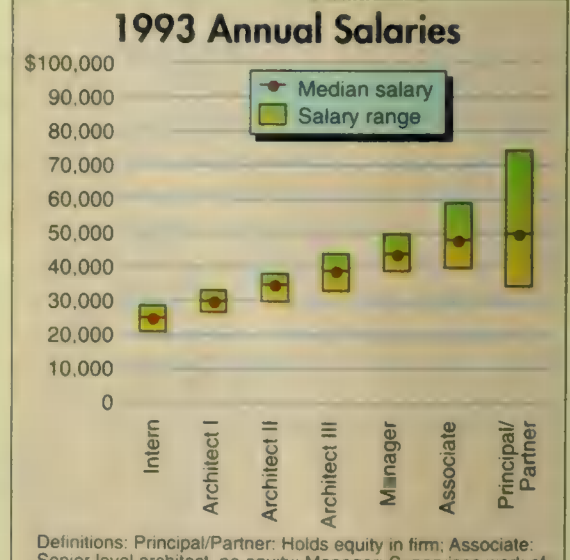
Comp time can get sticky in view of a Federal crackdown on abuse of "exempt" (certain categories of salaried) employees. Hourly employees, according to the federal Fair Labor Standards Act (FLSA) must be paid at least time-and-one-half for those hours worked over 40 in a week. One firm that docked pay for salaried employees who took partial days off, had, for FLSA purposes, transformed them to hourly. The firm was required to make restitution and pay a stiff fine. Says Schrohe, "While most staff, other than on-call employees, are on 'salary' for ease of payroll purposes, whether or not one is 'hourly' for overtime purposes is dependent on state and federal rules for classifying individuals as professional, management, and administrative exempt." (The Employment Standards Administration of the U. S. Department of Labor, or state labor departments can answer questions on exempt status.)

An end to compensation abuses?

The downturn has increased architects' traditionally high job mobility, and many architects interviewed said they were forced to accept new positions at a lower salary. In other firms, though, management-level executives have accepted pay cuts in order to maintain staff salaries. Other practices are abusive. According to one disgruntled architect, a four-day work week meant, "our pay checks have been cut by 20 percent, but the work load and expectations haven't changed. 'Reduced hours' are just a myth."

Some firms maintain a revolving-door policy for entry level staff to avoid paying health benefits: they hire employees full-time with a three-month health-benefits waiting period, then fire them four to six months later (usually the day after construction documents have been completed for a particular project). Soon after, new employees are hired for similar positions. (Some such practices may draw the interest of the IRS as well as labor departments.) Victims of compensation abuse can attempt to censure AIA members under the Institute's code of ethics. More often, report interviewees, word gets around and job seekers avoid firms with bad reputations. ■

Katherine Kai-sun Chia writes on architecture and practices with the Maya Lin Studio.



Definitions: Principal/Partner: Holds equity in firm; Associate: Senior level architect, no equity; Manager: Supervises work of others; Architect III: More than 5 years experience since licensure; Architect II: 2 to 5 years since licensure; Architect I: Less than 2 years since licensure; Intern: Degree in architecture, working toward licensure.

Source: 1993 AIA Firm Survey

RECORD invited three experts to compare architects' compensation to that of other professionals with similar education and responsibility, then to suggest what architects should earn.

Value, Not Hours

By Weld Coxe. Coxe is a principal of The Coxe Group, Inc., management consultants to architects and other design firms.

In the upper quartile of the salary range, architects are very well compensated for what they do, meaning that pay is adequate for the societal value and risk. Such firms include high-profile architects with value to sell and high-quality service and larger, (50-person-and-up), better-managed firms. Our executive-search people are filling slots for a director of health-care planning at $90,000 plus. A director of design may come in at over $100,000. These aren't average salaries, but we get requests regularly for people at these levels from firms that have learned the value of high capability. Obviously, not all architects do well; some don't negotiate an adequate fee and some spend all their fees doing the work.

A recent story in the *New York Times* reported an average salary for people with two years of graduate education at $22 an hour, which is about $40,000 annually. Architects are right in that range, which suggests that they are not particularly underpaid. In terms of the risks and responsibilities architects assume, however, they should make a lot more money.

Benefits

Compared to other professionals, architects typically have pretty good *health plans*, covering at least the employee. About half cover the employee's family.

Typically, junior people receive two weeks *vacation;* experienced staff and senior people can usually take three and four weeks. This is fairly typical of the professional world.

Among architects, group *life insurance* is very common, but not necessarily universal. Some professions are more generous, some less.

One of the major shortfalls of the profession is the lack of *pension plans*. Of comparable professionals, architects in private practice have probably been least committed to pensions in any form. Firms have instead usually offered profit sharing.

Tax changes in the 1980s discriminate against firms that have many younger employees and offer pension plans, so many firms don't offer them. The other problem with pensions is that employee mobility is much higher in architectural firms than in the larger business world. Very few staff turn out to be "keepers" who can collect their pension. Some other professions have developed pension plans through professional organizations that move with the employee.

Why don't architects earn more?

Many architects have low self-worth, and don't stand up for themselves. The firms that pay poorly are typically high-design architects where job applicants are beating down the door. Some see the office as a sort of graduate atelier—they're paying a stipend, not a salary. If you want a living wage, you shouldn't work for them. We've consulted with many of the star architecture firms over the years, and I can assure you that the number of firms that exploit labor is small.

Long hours

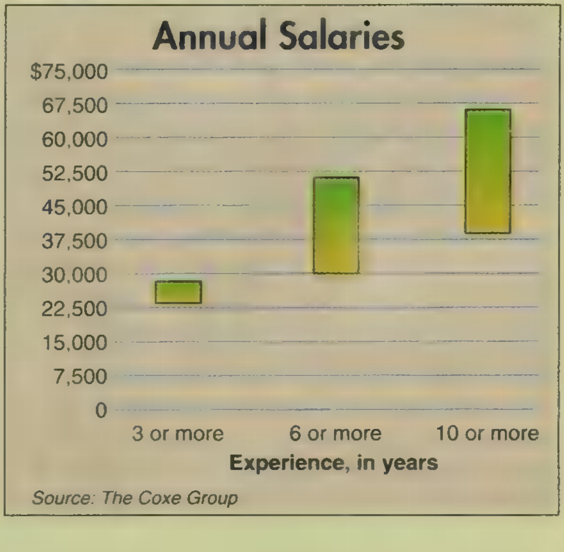
The hours architects work is another story. Architects work harder and longer hours for less reward than any other profession. This is to some extent self-imposed, however. There's an architectural work ethic that comes out of the studio charette process, so there is a great deal of work that is fundamentally volunteered. Firms are used to taking advantage of this.

I don't know of a firm that requires charettes without paying people bonuses or additional pay at salary rates. That's at least partial compensation. Junior people can in some cases say they were forced to put in excessive hours, but the minute they work up to associate level, they expect the same of their successors. I don't pretend to deny that work hours are exploited; I just don't think this represents the mainstream, as oral tradition would have it.

Architecture as a creative endeavor is so qualititative and subjective that it's easy to put in 100 hours you didn't have to. If you have time, you come up with 14 schemes. Engineering is more analytical and quantitative, so you can know better what you get for an hour. For lawyers, billing every hour is ingrained. ■

Architects work harder and longer hours for less reward than any other profession. This is partly self-imposed, however. There's an architectural work ethic that comes out of the studio charette process.

Architects' median salaries at entry level are well below comparable fields (in the 20s and low 30s at five years). With more experience, the spread widens, based on capability. Associates get moved up to $40,000 to $50,000. Top firms will bump salaries up to the 70s, including bonuses, to keep valued staff. Figures used reflect a region in good economic shape (Washington State). W. C.



Source: The Coxe Group

Clients Set Value

By Frederick D. White, Senior Vice President of Mark Zweig & Associates, Natick, Mass. Zweig is a management consultant and publisher of books and periodicals for design firms. Assistance by Jerry Guerra.

Architects, at least in the first 10 years of their careers, earn a lot less than engineers and attorneys. Compensation statistics in other professions are reported in different ways, however, making comparisons hard.

Median earnings (including bonuses and profit sharing) of an "Architect I" (less than two years experience since licensure) was $30,000, according to 1993 AIA firm data. An "Architect II," who is licensed, with six to eight years' experience, earns a median income of $35,000. According to the Engineering Workforce Commission's 1993 report to the American Association of Engineering Societies, licensed engineers with masters degrees working in consulting firms earned salaries ranging from $39,800 to $46,200. The Bureau of Labor Statistics breaks down attorney compensation based on responsibility and degree of difficulty. An approximate comparison suggests the attorney equivalent of the Architect I earns $45,000; the equivalent of the Architect II earns on average over $79,000.

The AIA figures show that an associate—a senior-management architect who does not hold equity in the firm—earns a median income of $45,000. "Supervisory" engineers, with at least eight years experience, earn more than $59,000. A "high responsibility" lawyer (not a principal) earns on average nearly $96,000. Compare this to the median salary plus bonus for architectural firm principals, which is $100,000, according to Mark Zweig & Associates' 1993 *Principals' Survey.*

Beating the averages

Some architecture firms can offer compensation at much higher than AIA survey averages. Pay is higher in some regions; larger firms usually pay better; and firms deriving significant income from "hot" specialties, such as research and development, pay better. A/E firms often offer better compensation than firms that provide only architectural-design services.

Though architects earn less than other professionals, one can argue that they're paid adequately for what they do. The salaries of architects in private practice are set by their employers, who in turn are paid through fees owners find acceptable. Because architects generally budget their fees by estimating hourly labor rates, clients are telling them exactly what their time is worth.

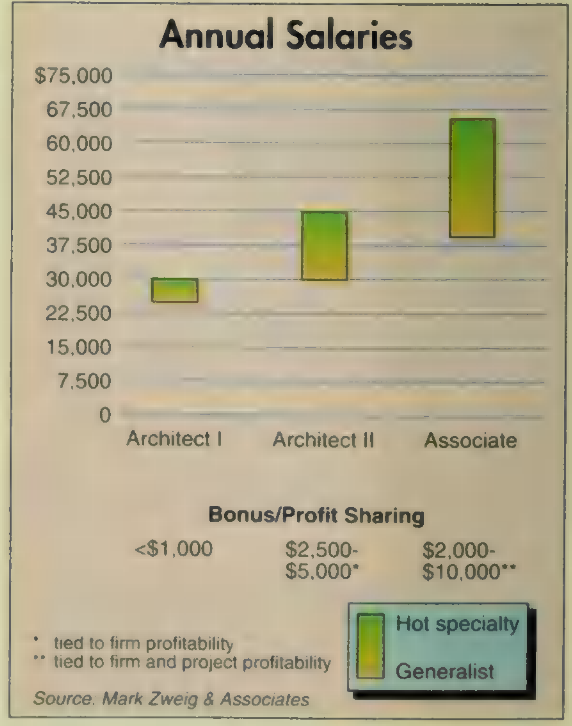
Boosting fees is a must

The real question is: why are architects' fees so low? Some answers:

- Architects seek variety in their work; clients will pay more for specialized experience.
- Architects' aversion to risk has allowed other professionals to take away tasks that clients value highly.
- Architects don't pay enough attention to the business side of the business.
- Architects are *willing* to work for low fees because they like what they do.

The chart below shows where compensation *ought* to be. Though nearly half of AIA firms pay overtime to salaried staff, we show instead recommended discretionary or performance-based bonuses. Given how hard they work, the liabilities they assume, and the level of responsibility they have, architects have a right to expect to earn more. However, firms will have to start by demanding and justifying high fees from their clients—and refusing to work for less. ■

> *Some practices offer superior compensation. Among them, larger firms and A/Es. Smaller offices that pay better usually derive significant income from "hot" specialties, such as research and development.*



Source. Mark Zweig & Associates

Scales (right) represent what national average compensation should be for three job categories. The higher figure in each scale is for a "hot" specialty. The lower figure is for the generalist architect working on a variety of project types—F. W.

Benefits

General: *Eight paid holidays, two weeks vacation (Intern, Architect II); three weeks vacation (Associate).*
Health Insurance: *Company-paid for employee (all staff), plus a portion paid for dependents, plus a dental plan (all staff in large firms).*
Other Insurance: *A minimal life-insurance plan (all staff); long-term disability (Associate).*
Retirement: *A 401k plan (for all staff in large firm).*

Poverty Profession?

By Fred Stitt. Stitt is director of the San Francisco Institute of Architecture, and publishes Guidelines *practice aids.*

There are wide differences in pay among architectural employees, and the low end is very low indeed. Some entry-level employees are paid nothing or minimum wage in exchange for training or the privilege of working at well-known, high-style offices. Others who have made a point of understanding how offices work, and have prepared themselves to be productive, may start working at $13 per hour.

Office size is the main determinant of pay scales. According to *Guidelines* fee and pay surveys, AIA and other professional firm surveys, and Bureau of Labor Statistics data, those fortunate enough to find paying jobs in the last year or two found average entry-level wages of eight to nine dollars per hour in small offices (about $18,000 annually), up to $12 to $13 (about $27,000) in the largest firms. By comparison, an entry level Justice Department attorney will earn $25,000. Recent architecture graduates are notoriously underprepared for productive work.

There are many in the profession who consider material concerns to be beneath them. The "dribble down" of that attitude, held by far too many, is that making money bespeaks greed and is somehow immoral.

Pay is 20- to 40-percent higher in large firms for the same job categories. And there are more benefits, such as health insurance, and profit sharing or bonuses. The small, two- to four-person firms pay the least because these practices traditionally take on the most marginal clients and are the least well-managed. Many owners of such firms only survive because of outside income or support from a spouse. Consulting engineers, landscape architects, interior designers, and other consultants who run smaller offices earn incomes that are very similar to architects'. The exception is engineers in larger practices, who earn about 20 percent more than comparably experienced architects.

Some professionals' pay is overstated

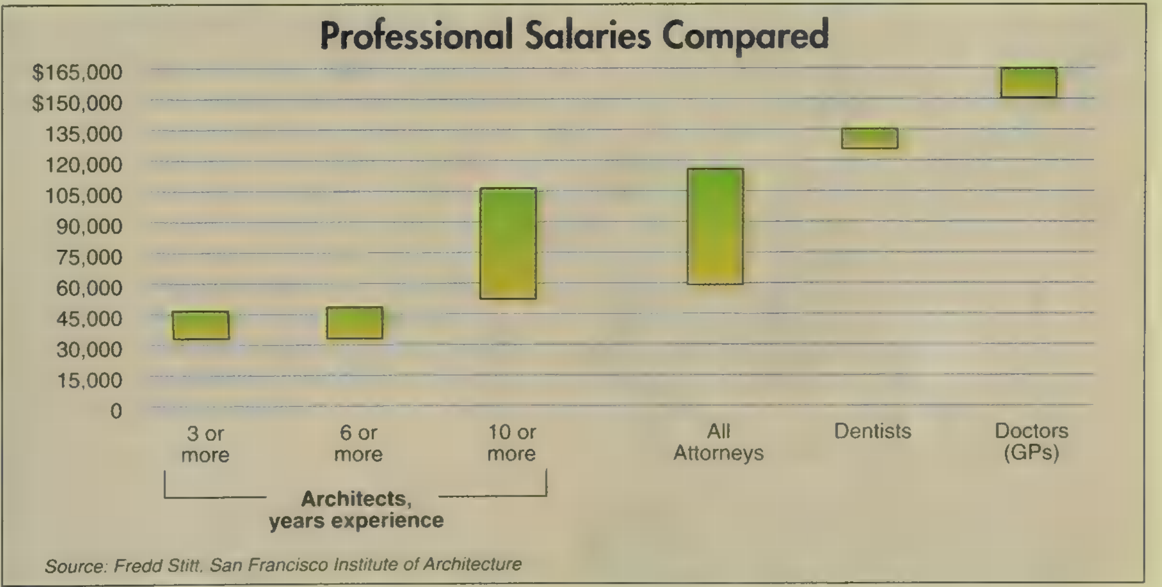
Everyone hears about new law-school graduates landing $80,000 jobs. In reality, most attorneys have small practices and take home about $60,000 to $70,000—about the same as the median incomes of architect-owners of small firms with five to nine employees. Lawyers in private practice at the highest levels of experience earn $92,000 to $116,000 respectively, comparable to financially successful architects. Dentists do very well at $130,000 net pretax personal income. Income is high relative to the education required. Their careers are a good deal financially, but prestige and self-image are surprisingly low. Pre-tax personal income for doctors (general practitioner) has averaged between $150,000 to $165,000 annually for the past few years. It's the specialists—cardiologists, anesthesiologists—who earn the big bucks you hear about. And they expect to put in longer hours for less money if the Clinton health program passes.

Building income

The figures make it clear what design professionals should do to increase their personal incomes. If you want to reach the $75,000-to-$85,000 level, you have to run an extremely efficient small firm or become owner or partner in a well-managed office employing ten or so people. If you want to earn more, get into a larger firm and become a partner. If you don't want to do those things, plan on the simple life.

Too many employees consider low pay the price you pay to be an architect, an attitude often reinforced by educators. There are many in the profession who consider material concerns to be beneath them. Their opinion is that those who actually need to live off their income . . . well, they just don't "belong" in this most gentlemanly of professions. When they then claim to be poorly compensated for what they do, one would have to respond bluntly, "I'm not surprised." ■

National pay averages for architects are skewed downward by the numerical dominance of small, low-paying offices. —F. S.



Source: Fredd Stitt, San Francisco Institute of Architecture

Freeing the Information Logjam

A CAD-based structural-analysis program evaluates a selected area to be spanned, then develops a materials schedule, chooses details, and draws wood framing in plan (or 3D, below).

Dennis Neeley: We are now deeply into the electronic-information era. Plunging costs will make enormously powerful electronic tools much more accessible. Not only will this dramatically enhance the delivery of services, it will redefine what "architect" means. Unlike other transformations in the field (professionalization at the end of the 19th century, or the increasing specialization of practice after World War II), the changes being wrought by electronic information are moving at blinding speed. Practitioners must embrace these tools, or others will be doing their job—by the year 2000.

Design is information

The long-heralded electronic-information revolution actually began in 1985 when inexpensive, computer-aided design software and hardware became sophisticated enough for the mass market of architects, engineers, contractors, and owners. Though the revolution in the design field is based on CAD, it's not limited to the automation of drawing. CAD needs to be thought of as the core of a tool for the collection, analysis, and management of information.

Dennis Neeley is vice president of Industry Marketing for Softdesk ASG and wrote CAD and the Practice of Architecture.

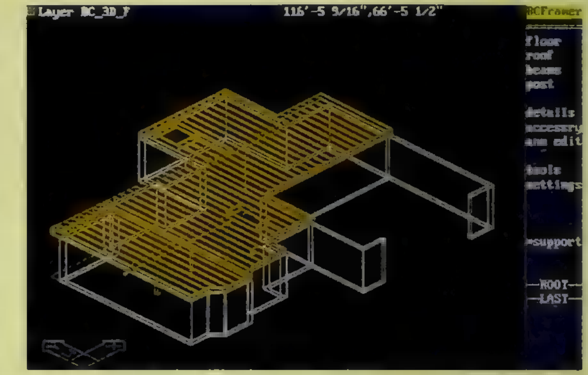
For a new central library at the University of British Columbia, in Vancouver, Aitken Wreglesworth Associates (collaborating with Arthur Erickson) used Architrion to take a design sketch (1) and turn it into a 3D model (2), within which individual elements are studied (3). Highly rendered versions help confirm materials choices and are used for presentations. From this database, the firm made 2D CAD working drawings (4).

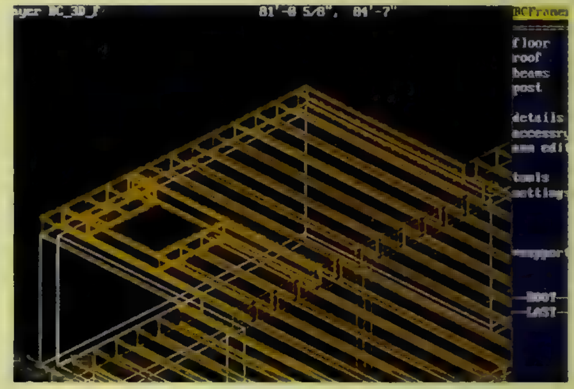
The tool will blur old distinctions, such as drawings and specifications. Software users and developers have learned to link the graphic entities of CAD to data, even to an external database. Such drawings are becoming "smarter," capable of changing data associated with an item as an item is changed. Now drawings generate schedules; soon they'll "write" specs. It is not unreasonable to expect that the software will also analyze specification sections to determine that they are consistent and free of conflicts. These ways of designing and communicating are so different it will make it much harder to work the traditional way. Work will flow to those who master the new tools.

You no longer need to know how to draft to make perfectly drawn drawings. Today software can make renderings, calculate duct sizes, draw framing plans (screen shots, right), calculate building-assembly U-values and energy use.

RECORD: Just because you can readily draw a floor plan, and easily place symbols for furniture on it, doesn't mean you have the analytical skills to tell whether the floor plan actually works . . .

DN: I know that talent and knowledge are necessary to make good designs and to create proper documents. Software developers, however, are embedding within application programs more data and more evaluation criteria and design methodology. Consider mechanical-systems analysis programs.





Combining cooling criteria with data on room area from drawings, they can draw a ductwork layout with appropriate diffuser output. Similar tools exist for structural engineering. These programs can work with information from simple, diagrammatic drawings. They can feed information back to the CAD programs, which can then generate complete contract drawings and schedules of impressive complexity.

Automatic design

RECORD: Will this process drive us to only those low-effort, off-the-shelf solutions that can be readily analyzed by software, rather than stimulating unique or more creative schemes?

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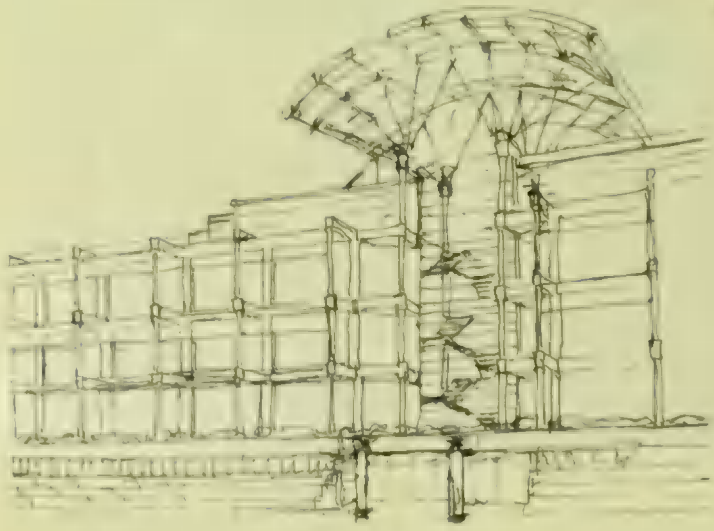

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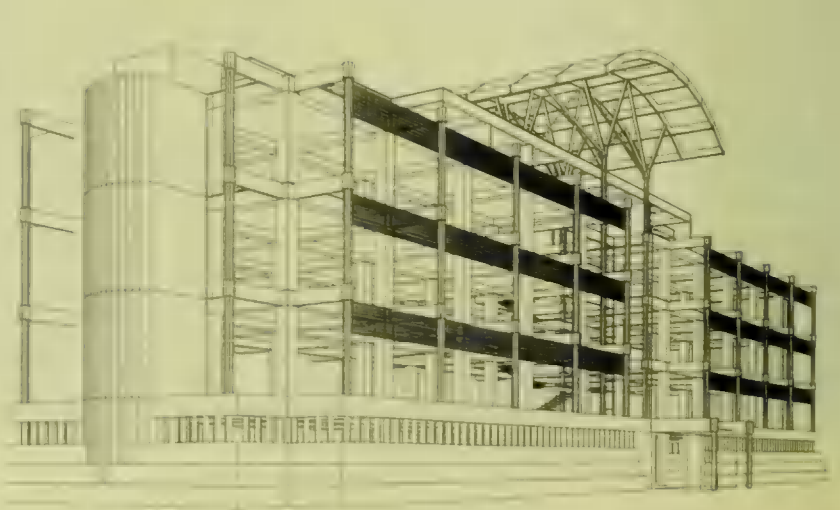

Dennis Neeley sees exciting new horizons opening for architects in fast-developing CAD-related applications. RECORD's James S. Russell plays devil's advocate.

DN: Not at all. Software *captures* expertise. Just because CAD generates a ventilating "design" doesn't mean the air flow is any good. Next year, or the year after, though, you will be able to look at a 3D animation of the air movement at different times of the year and with different occupancy loads. Won't that improve design?

RECORD: Does this mean that small firms can act like big firms, and big firms will disappear? Or will big firms use the fanciest technology to wipe out the small fry?

DN: I could make a convincing case either way. By the year 2000, however, the one-person office will have access to more information, more drawing and database power, and more analysis and visualization power than the biggest and most advanced firms have today. You won't need large, separate firms or entities to do a great deal of the analysis, documentation, take-offs, and management of the design and construction process. Yes, you should understand the criteria behind electronically generated material, but the power of the software and hardware engines is such that you don't have to know about air flow to calculate the size of a duct; you can create framing plans without knowing load paths. The tools are growing so powerful that architects can take a larger role in managing construction; contractors can move into design; owners can design and build.

Who is the architect?

RECORD: We're already seeing a blurring of boundaries as contractors, engineers, and interior designers try to expand their turf into areas once considered the sole province of architects. The reverse holds true as well. Thus, the revolution, if it exists, is not necessarily tied to computers per se.

DN: The software and hardware tools we now have are helping to blur distinctions between disciplines, but these distinctions are artificial anyway. Legally, an architect has a certain definition, but is the *notion* of architect actually more fundamental? To some people, the architect creates and orchestrates; in this mode licensure is incidental. Many of us have seen contractors or interior designers who are just as good at this as architects.

RECORD: Blurring the traditional boundaries between disciplines also blurs responsibility. How can the owner be sure all the bases are covered?

DN: Architects are already regarded as less important in the process because many shed responsibility. Clients value firms that will accept responsibility. More importantly, why do so many things go wrong? In many cases it is because we haven't *known*—we haven't had access to key information. CAD and computers offer the opportunity to take more control. With control come fewer errors and more value to the client.

The interactive, "expert" help included in manufacturers' electronic product databases, for example, may prohibit a window selection if it can't be manufactured with a selected glass. Software can assess criteria and product choices entered by the architect, and generate a set of details and a specification that is suited to the project's unique needs.

Presentations

DN: Whether you use wire-frame line drawings, simply shaded models, or photo-realistic renderings, CAD-generated presentations are allowing clients to share more thoroughly in the design process. You can look at nearly any element of the design (below).

RECORD: The down side is that it's so easy to make so much information available that it calls upon the client to make even more judgments than she already makes. Aren't too many clients already overwhelmed by the choices available on everything from the tint of the window glass to the hardware on the door? Isn't it true that, if anything, the power of new tools and data sources creates an even greater information logjam for the architect to untangle?

DN: Some futurists have predicted that clients will use electronic tools to eliminate architects and engineers. No doubt some will. But most clients do not want to be the designer and the contractor and the facilities manager. Clients do fear that designers don't understand what they need. If the designer has the tools to reassure the client on that score, he will be doing a better job. ■

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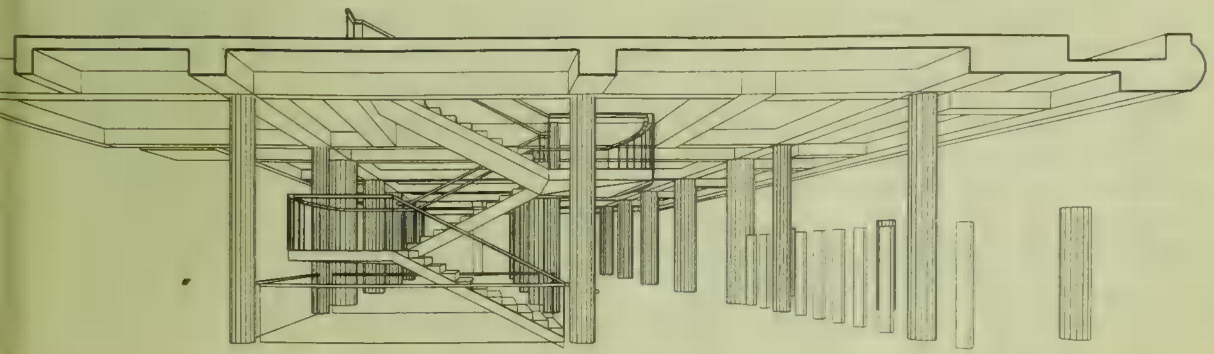

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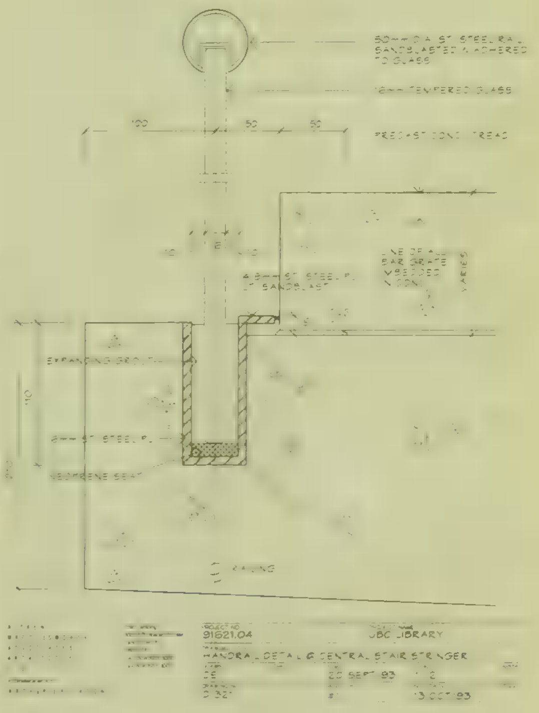


Rx 4 RFPs

INWORK 3.15

Vendor: Parallel Resource, Inc., 703 East Glenn Ave., P. O. Box 2488, Auburn, Ala. 36831 (205/821-9000, fax 205/821-9700).
Price: $995; demo version: $45, which is credited toward a full package.
Computer: Computer capable of running MS-DOS, PC-DOS, or DR DOS 5.0 or later.
System: Requires at least 550K of free memory plus 2MB of expanded or extended memory and a fixed disk with at least 7MB free. Needs a PostScript printer; we strongly recommend a mouse.

This software automates production of federal Standard Forms 254 and 255, but doesn't have the flexibility of RFP (opposite) for other marketing needs. We last looked at INWORK in March 1992, when it was called SF/X. A trademark dispute forced the name change. Lots of other things have changed as well. There's a nicer interface, though it's still not what-you-see-is-what-you-get (WYSIWYG). It is easy to get around in, and excellent word-processing functions are built in. It's also easier to import and export text from other programs, and it's simpler to move data from one project file to another. The built-in Help is context-sensitive now.

Graphics can be imported as EPS (encapsulated PostScript) files; earlier versions imported graphics only with difficulty. The software doesn't limit the length of records; it adds pages as needed to accommodate long résumés or project lists.

As with earlier versions, you fill in the fields of the 254/255 forms by pulling information you've already installed in linked databases. You select appropriate staff résumés, histories of relevant past projects, and so forth. The program prints the forms as well as the data, which is why you need a PostScript-compatible laser printer. Other laser printers need an auxiliary cartridge or an in-the-computer PostScript interpreter.

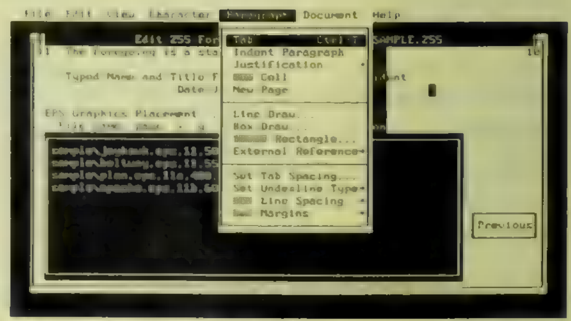
The underlying database engine is dBase III-compatible. Just about any database software can read and write this format as can most spreadsheets. This eases the import of data you may already have on-hand.

Any office that applies for more than one government project every two months or so should find INWORK useful. The biggest expense isn't the software, it's arranging and maintaining the qualifications, project data, and résumé files.

Manual: Large-format looseleaf with excellent practice tutorial.

Ease-of-use: Good. About the only improvement would be to make it WYSIWYG.

Error-trapping: Good. Saves each record automatically. Even a power failure would mean only a small inconvenience. *S. S. R.*
300 *on Reader Service Card*



INWORK's look isn't WYSIWYG, but you quickly learn how data will appear when printed. The menu-driven format is easy to follow as it steps you through SF 254s and SF 255 forms (shown).

Perspective

Automated Marketing

Over the nearly eight years this column has run, we've reviewed many packages designed to make it easier to produce proposal documents, particularly the SF 254/255 required for federal (and many state) projects. They have ranged in sophistication from simple templates that allow you to carve up text manually and move it around—the computer analog of scissors and paste—to programs (like those reviewed here) that use sophisticated methods for searching and linking data—even calculating average annual project size and projecting billing. The current crop are oriented to DOS computers, although software using the form-building capability of Aldus's PageMaker on the Apple Macintosh was sold for a time.

This month, we look at the latest versions of the two packages that have had staying power. Though INWORK has the handsomer interface and is perhaps a bit easier to use (for smaller practices, anyway), it is geared to SF 254/255, and lacks the flexibility to handle all of a firm's proposal-writing chores. RFP is a far more flexible and comprehensive solution. And, until this April 15, the SF 254/255 module is very attractively priced.

Both require you to enter (or transfer) data on your personnel, projects, clients, and so forth into various databases. The programs link this information to appropriate locations in the proposal. You use query screens to select only the relevant information (a consultant's research-lab experience but not its office-building experience, for example).

Do you need a proposal-writing product? Vendors claim that big proposals can be produced in perhaps one-fourth the time needed by cutting and pasting. Our experience suggests this is about right. Critics say the time it takes to organize and input the information outweighs the time savings. Offices that do mainly one kind of work, say churches or schools, can usually get by with cutting and pasting text on a word processor. (Note that RFP also sells templates for WordPerfect.) If you're being overwhelmed by the detailed proposals requested by clients, though, you need a powerful tool like this. *Steven S. Ross*

Clients—especially government clients—seek ever more detailed proposals. Updated software, offering versatile methods of collecting and collating firm data, comes to the rescue.

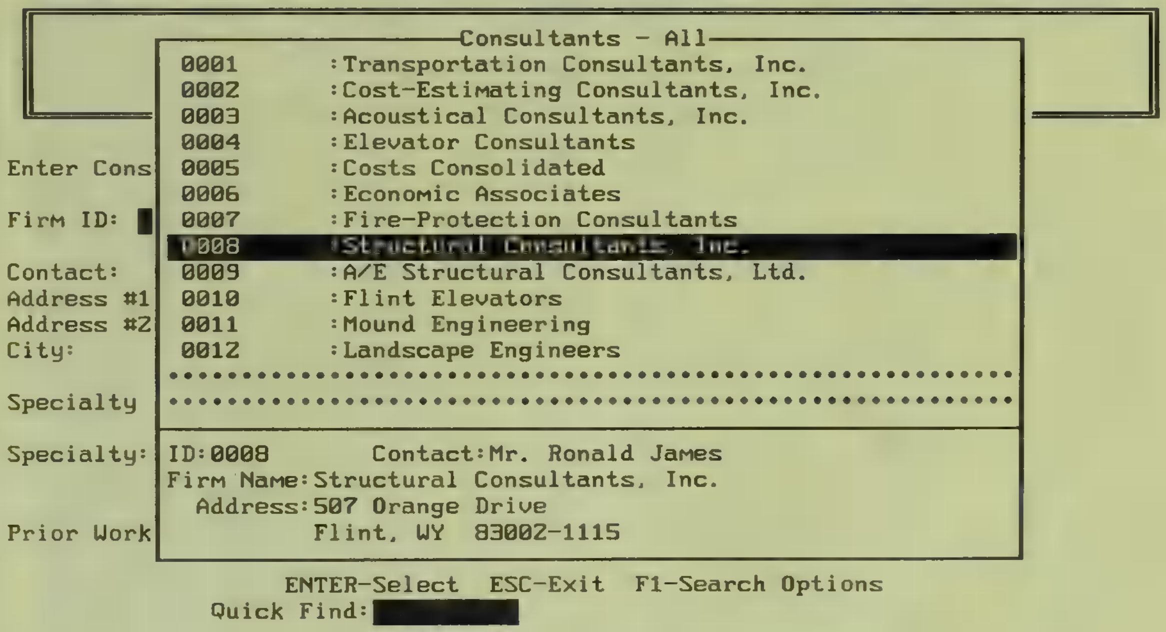
RFP Gold 7.1

Vendor: A/E Management Services, Inc., 4251 Plymouth Rd., P. O. Box 986, Ann Arbor, Mich. 48106-0986 (313/761-9410, fax 313/761-9518).
Price: SF 254/255: $1,050 ($375 before April 15, 1994); custom proposal generator: $1,050; relational report writer: $1,050 (all three for $2,795—$2,120 before April 15). HP or PostScript driver is included. Network version: $6,190 ($5,515 before April 15); WordPerfect interface: $750; Microsoft Word interface: $450; text import (for other word-processing programs): $300. Accounting-data interface: $400; append/export utility: $300; Annual maintenance: $600 for single user, $1,200 for network. Liberal site-license policy.
Computer: DOS-based computer (MS-DOS or PC-DOS 3.3 or higher; DR DOS 6.0 or higher should also work).
System: The application needs 640K RAM and about 4MB of fixed-disk space.
Output: HP LaserJet-compatible or PostScript printer is best. Daisy-wheel or dot-matrix printers do a poor form-printing job.

We last looked at RFP more than four years ago. It remains by far the most comprehensive software for keeping track of your office's qualifications, and for generating proposals, especially the federal government's Standard Forms 254 and 255. At about $3,000 for all the modules a single user in a medium-size office would need, RFP isn't cheap (note the bargain prices until April 15), but there's a lot to it. The Gold version combines a report writer, the SF 254/255 generator, and a custom-proposal generator. The program will import nearly all formatting—even graphics—from WordPerfect; the Microsoft Word interface isn't quite so seamless. For other word-processing sources, you'll have to import as "text only." An append/export utility and accounting-data interface let you work with budgeting or billing programs.

The core of RFP is a series of databases into which you place firm qualifications, staff biographies, addresses, experience, billing rates, and so on. To prepare a proposal, you use this version's much-improved Lookup feature to browse or find specific records, bring them up, and modify them on-screen. We found the import link nearly seamless with WordPerfect 5.1 and 6.0 for DOS and WordPerfect 5.2 for Windows. RFP files also export cleanly to WordPerfect, so that you can make use of that program's formatting and editing capabilities.

RFP offers electronic tags that solve a common database problem. You can give a company or part of a company (a specific office, for example) a unique tag so that duplicate company names can appear in the same database. You can also use a tag to differentiate employees with the same name, or to mark different biographies of the same person (each emphasizing different skills).



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                       Consultants - All
               0001      :Transportation Consultants, Inc.
               0002      :Cost-Estimating Consultants, Inc.
               0003      :Acoustical Consultants, Inc.
               0004      :Elevator Consultants
Enter Cons     0005      :Costs Consolidated
               0006      :Economic Associates
Firm ID:       0007      :Fire-Protection Consultants
               0008      :Structural Consultants, Inc.
Contact:       0009      :A/E Structural Consultants, Ltd.
Address #1     0010      :Flint Elevators
Address #2     0011      :Mound Engineering
City:          0012      :Landscape Engineers
               •••••••••••••••••••••••••••••••••••••••••••••••••
Specialty      •••••••••••••••••••••••••••••••••••••••••••••••••

Specialty:     ID:0008       Contact:Mr. Ronald James
               Firm Name:Structural Consultants, Inc.
                 Address:507 Orange Drive
Prior Work               Flint, WY  83002-1115

                    ENTER-Select  ESC-Exit  F1-Search Options
                Quick Find:
```

You can find records in RFP using a mouse to highlight menu lists (center of screen image above) or you can type text and ask the software to search for matches (bottom of screen).

Other niceties: Pre-formatted fields are provided for standard forms; RFP also includes user-definable fields; a field is formatted for international zip codes. RFP conveniently updates changed information across all linked data tables—when, for example, a newly married employee changes her last name.

You can also use the underlying database to track ongoing projects—for promotional use, of course, but even for billing. RFP will monitor percent complete for both purposes.

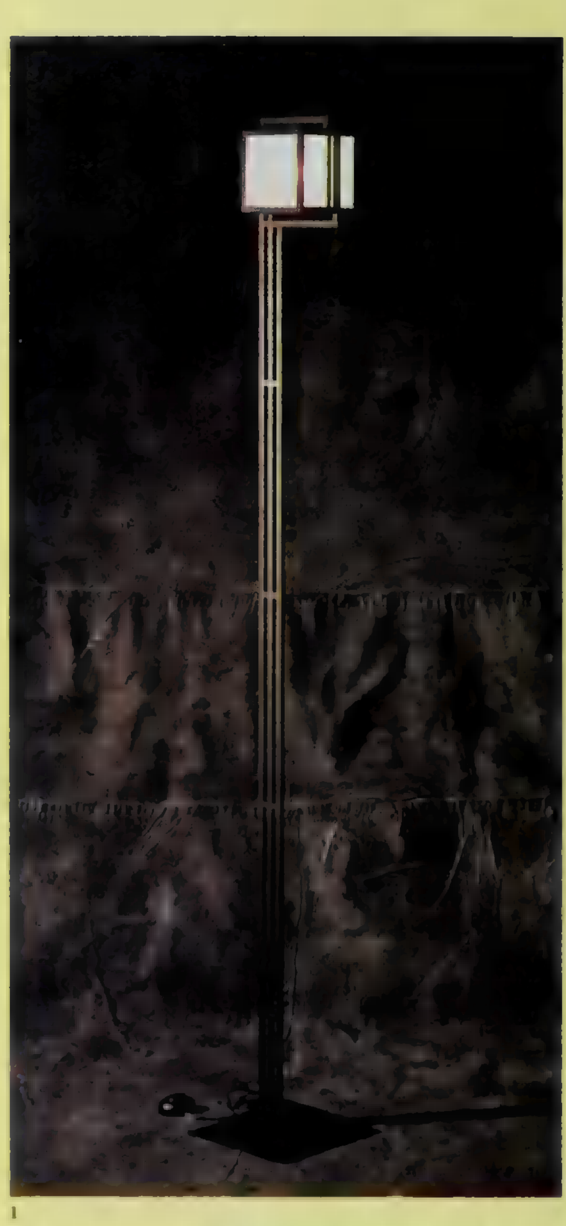
RFP uses the popular dBase format (DBF), with a simple yet serviceable interface. The underlying software is Clipper, which creates customized access to DBF files. Clipper's machine requirements are modest, so you can run RFP on computers as small as an old IBM XT. You will get much more satisfactory performance with a computer that uses at least an 80386SX CPU chip. Like all database software, RFP frequently reads from and writes to the fixed disk. Thus, the more free disk space, the better.

Manuals: The main manual is bound as a bulky 8 1/2-by-11 softcover book that lies flat. The tutorials are simple and straightforward, arranged module-by-module (not necessarily task-by-task). The manual is clearly written.

Ease-of-use: Good. The trick is to keep the database updated by using it for all project-tracking needs.

Error-trapping: You can modify the DBF files by exporting them to other software, such as spreadsheet or database packages like Paradox or dBase III or IV. When you send the files back to RFP, you get errors—as you might expect. *S. S. R.*
301 *on Reader Service Card*

Wright Lights



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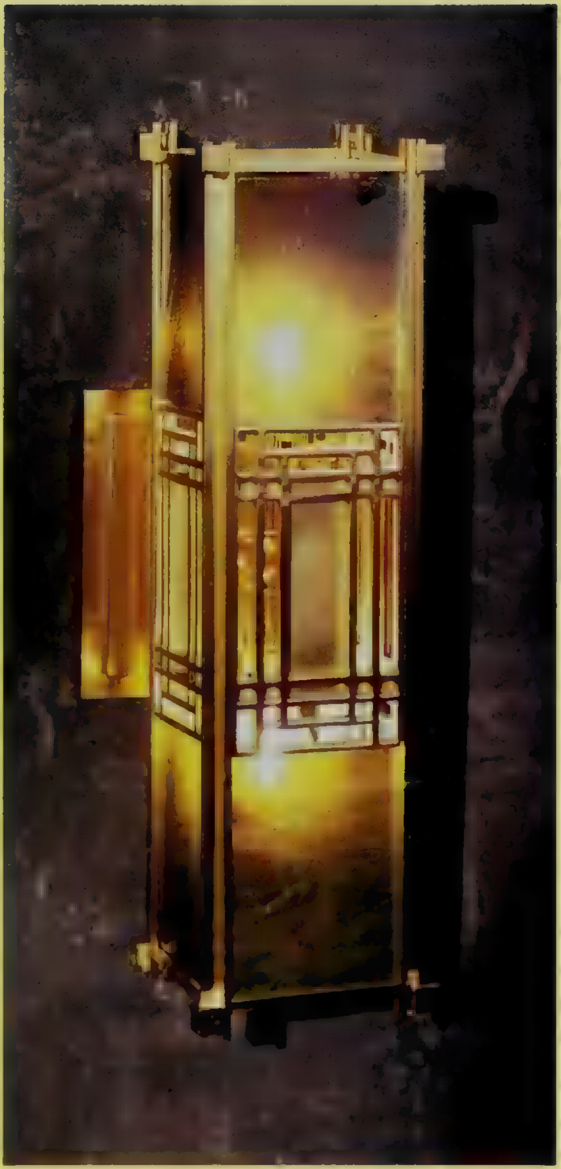

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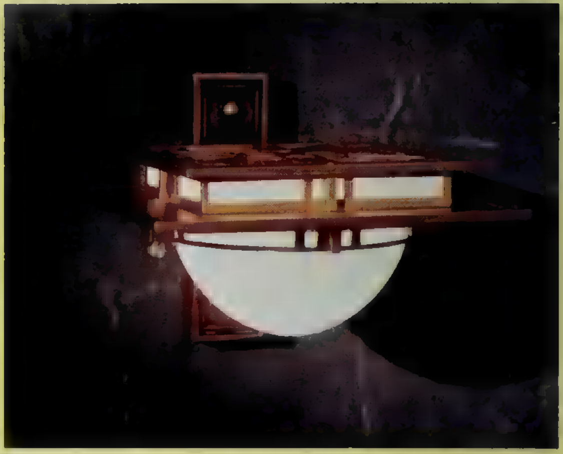

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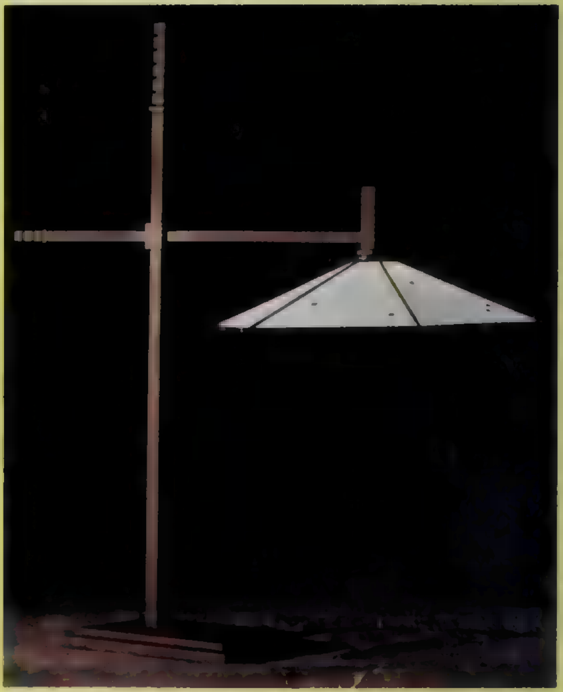

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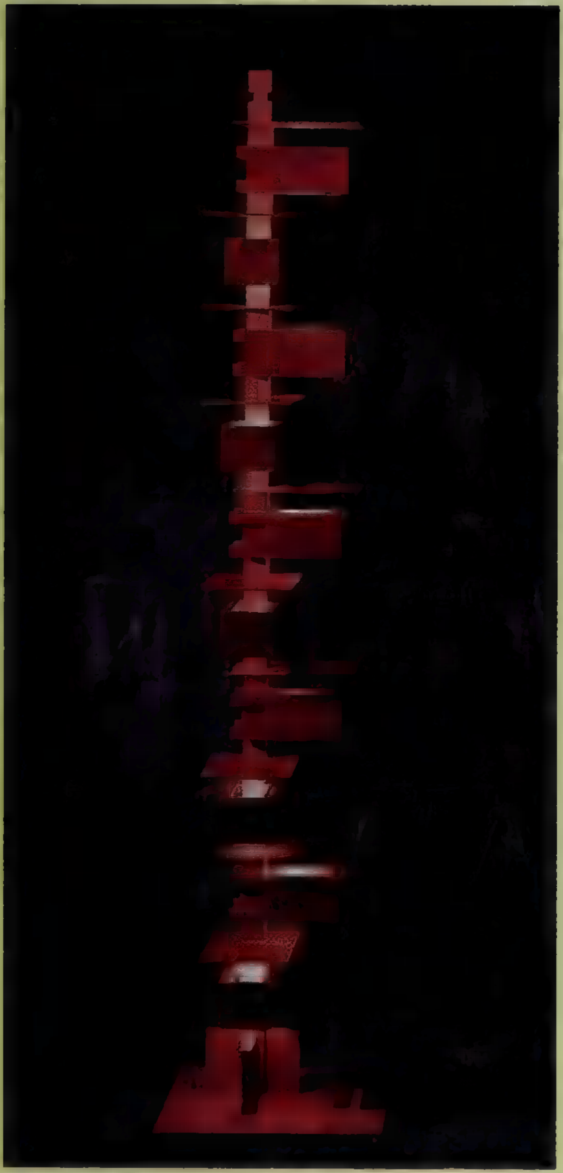
300. A stunning collection of residential lighting, designed by Frank Lloyd Wright and completely faithful to Wright's concepts, will be introduced at this year's LightFair (New York City, May 4-6). A joint effort of Japan's Yamagiwa Corporation and the Frank Lloyd Wright Memorial Foundation, the fixtures are part of the Decorative Design Collection licensed by the Foundation as Wright's heir. Under the guidance of Bruce Brooks Pfeiffer, former Wright apprentice and director of archives for the Foundation, the Japanese lighting firm assiduously captured the exact dimensions, color values, and material characteristics of the original luminaires. While individual fixtures were initially designed for a particular space in a particular house, Wright himself liked most of them so much that many appear in later projects. The Collection will be sold through the Museum of Modern Art Design Store (212/708-9888), currently exhibiting *Frank Lloyd Wright: Architect.* Yamagiwa Corporation, U. S. A., Seattle.

1. Originally intended for the living room of John Storer's Hollywood house, where it stands against the columns that separate large windows, the Storer lamp (1923) has a 76-in.-high painted-steel frame holding a white-glass shade only 8-in. wide. A 36-in.-high table lamp version of this piece is included in the collection.

2. Five of the fixtures selected for the new 13-piece collection were designed over 90 years ago for the massive Susan Lawrence Dana house (now Dana/Thomas; Springfield, Illinois, 1902), where sunlight streams through large windows glazed with Wright's wonderful copper-camed colored glass patterned in leaf, butterfly, fern, and other motifs abstracted from nature [, May 1991, pages 88-95]. The intricate, leaded-glass shades of the two Dana house fixtures featured on these pages echo the chevron-like motifs of the "sumac windows" of the home's breakfast alcove. Wright used the strongly vertical sconce, called Sumac 4, in the high spaces of the house, especially in the three-story entrance hall and in the clerestories of the open gallery. Materials are bronze and lustre glass; fixture is 14-in. high by 5-in. wide.

3. A familiar fixture, the wall light used extensively in the 1906 Frederick C. Robie house in Chicago is recreated in two versions: the original "sun lamp," a full sphere



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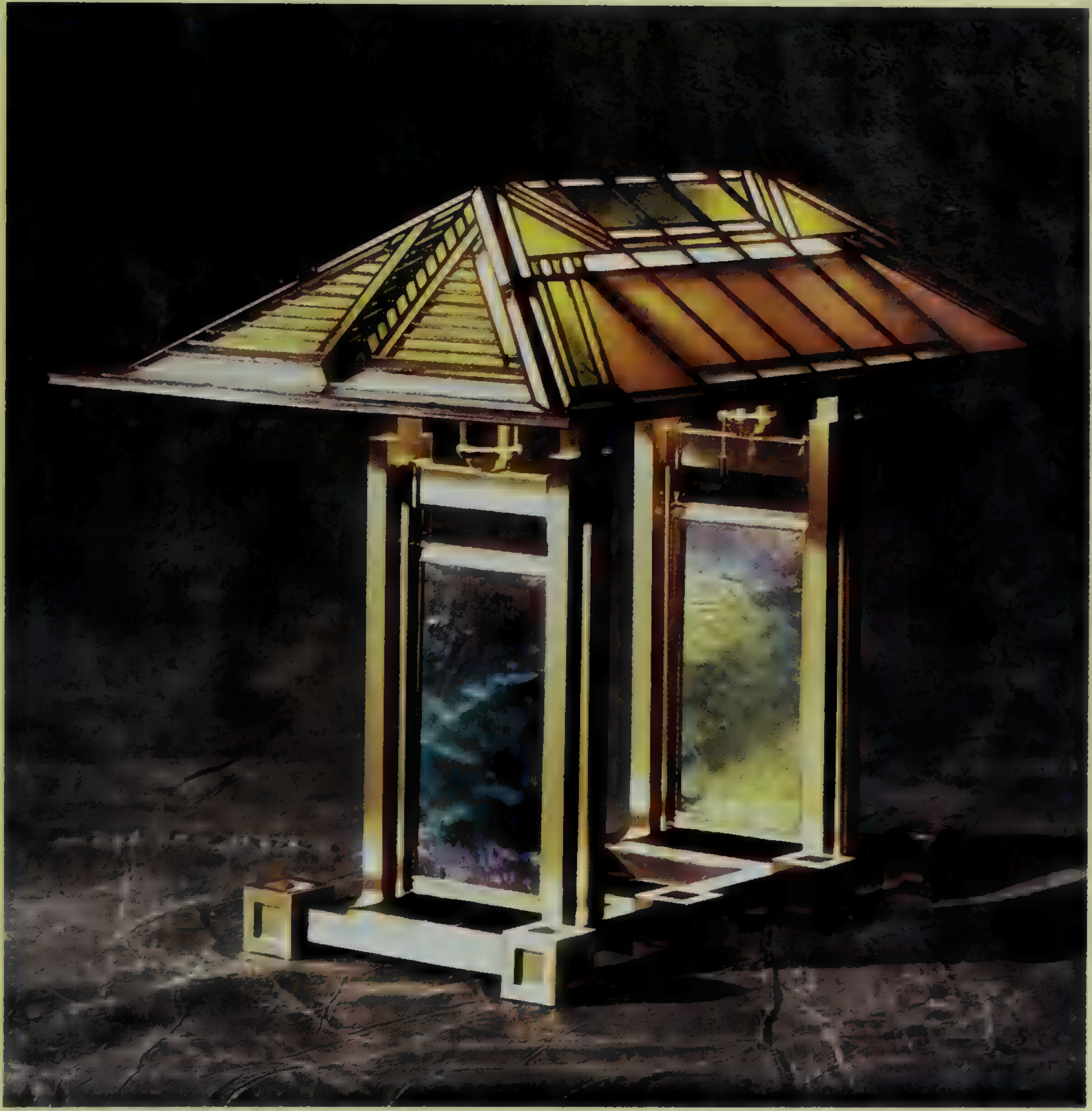


6

of white glass that seems to float in a square wooden frame, and the Robie II sconce, pictured. Here, the globe is cut in half, and suspended from a framework of bronze bars that cast shadows in all directions.

4. A table lamp, created for the short-lived Midway Gardens entertainment complex in Chicago, 1913, has a 31-in.-high painted-aluminum stand supporting a six-panel white-glass shade flecked with Wright's distinctive red squares. List price: $1,180.

5. One of three Taliesin lamps recreated by Yamagiwa, Taliesin 2 is the wood-block tower that lights large tables in the living room at Spring Green. In this replica, small incandescent bulbs placed within cherry-wood boxes climb an 80-in.-high central wooden column. Cherry-plywood baffles shield each light. The widest part of the lamp is its 17-in. base. Taliesin 1, not shown, is the small (20-in. high) table lamp designed by Wright for his own desk, with a roof-like shade hung from cherry-wood struts.

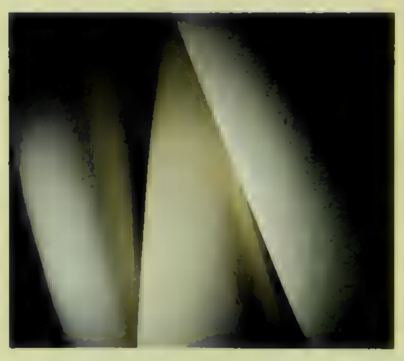
6. Another Dana House light, the Sumac 3 resembles a little house, with a "hipped roof" glass shade set on screen-like double-pedestal supports of bronze and lustre glass in warm yellows and autumn browns. The 23-in.-high by 28-in.-long table lamp is one of the most expensive of the recreated Wright fixtures, with a list price of $12,500. (The *most* expensive light in the collection, also from the Dana house, is the splendid replica of the grand chandelier Wright hung from the vaulted ceiling of the dining room.)

1. Storer 1. *Standing lamp, John Storer house: painted steel and white glass (1923).*
2. Sumac 4. *Sconce, Dana/Thomas House; bronze and lustre glass (1902).*
3. Robie 2. *Sconce, Frederick Robie House; bronze and white glass (1906).*
4. Midway. *Table lamp, Midway Gardens; painted aluminum and white glass (1913).*
5. Taliesin 2. *Standing lamp, Taliesin, Spring Green, Wisconsin; natural-finish cherry (1925).*
6. Sumac 3. *Table lamp, Dana/Thomas House; bronze and lustre glass (1902).*
For more information, circle item numbers on Reader Service Card

Product Briefs

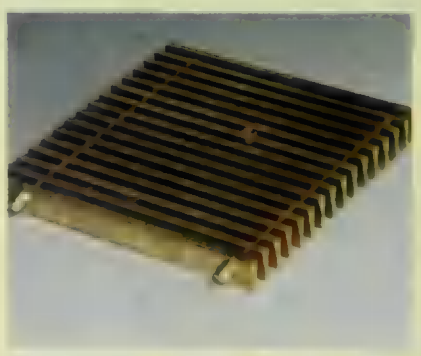
For more information, circle item numbers on Reader Service Card.

303. Polymer millwork
Exterior and interior architectural-trim elements, such as dentil moldings, are offered in a flexible composite capable of conforming to curves and bends without losing the original shape. Available in an integrally colored white material, trim pieces can be painted, cut with standard tools, and attached with fasteners or adhesive. FYPON, Inc., Stewartstown, Pa.

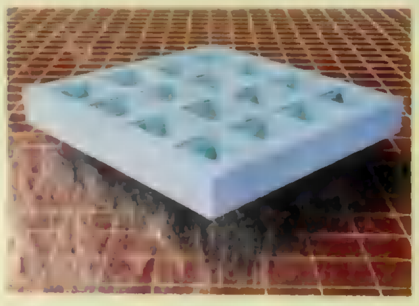


304. Fabric wallcovering
A new line, Natural Textures, includes over 40 patterns in linen, silk-like cotton/rayon blends, herringbone weaves, and botanical motifs, offered in colorways that permit almost 150 combinations of fabric and color. For contract application on walls and panels, wallcoverings come backed or unbacked, to list from $18 to $35 per yard. Carnegie, Rockville Center, N. Y.

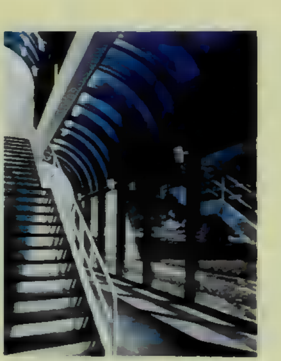
305. Life-cycle costing
A stand-alone module for Composer and MCaces estimating programs compares the costs of building-material alternatives over the entire life of a facility. Architects can input costs in current-year dollars and compute the net present worth of future expenses in several categories, such as routine maintenance, energy, and disposal costs. Building Systems Design, Inc., Atlanta.



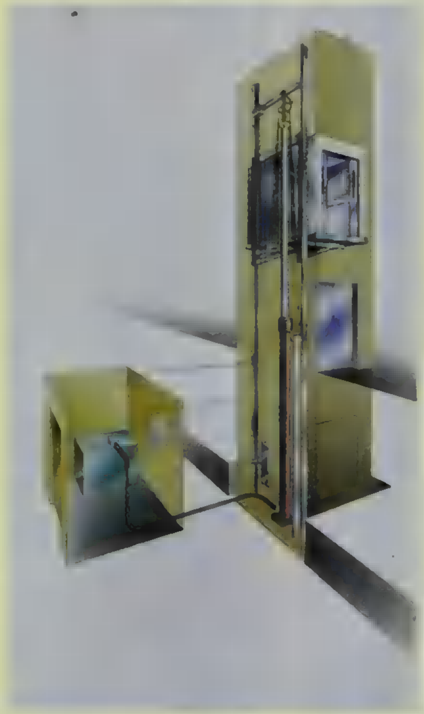
306. Entrance grating
A new Clean Tread grating design, available in bronze bar as well as stainless steel, has evenly spaced 1/4-in. openings, large enough to trap dirt without catching shoe heels, wheelchairs, or canes. Standard units come as large as 4- by 8-ft, for level-bed installation; 50-percent free airflow permits use as ventilation grilles. Kadee Industries, Bedford, Ohio.



307. Glass-paver system
Made of precast concrete, a structural grid incorporates Vistabrik 7 3/4-in.-square glass pavers to create traffic-bearing and light-transmitting walkways, stair treads and landings, and skylights. CastGlass panels can support a live load of 150 lb psf over a 6-ft clear span. Concrete can be integrally colored. Dura Art Stone, Fontana, Calif.



308. Architectural glazing
An abrasion- and chemical-resistant coating on one or both surfaces is said to greatly extend the "like new" appearance of Acrylite AR and Cyrolon AR sheet glazing. Cyrolon polycarbonate, with up to 250 times the impact-resistance of glass, is suggested for skylights and sloped glazing applications requiring extra strength. CYRO Industries, Arlington, N. J.



309. LULA lift
A limited use/limited application (a proposed code designation under review by ASME) roped hydraulic elevator developed to allow people with physical disabilities access to multiple levels within existing facilities, the Flexi-Lift is said to offer several economical installation, cab, and hoistway improvements. Cabs offer automatic horizontal and bi-fold, and manual-swing door options; a choice of car finishes, including metal or wood panels, and recessed accessories. The steel hoistway structure is modular, to more easily accommodate uneven walls or other site problems. It can be placed within existing hoistways as well as in new construction. Maximum travel is 25 ft, with up to six stops. Operates on 208V or 230V power. Access Industries, Inc., New Berlin, Wis.

310. 2D/3D CAD for Mac
MiniCad+ 4, with upgraded 3D drafting and viewing features, comes with a built-in database and spreadsheet, Smart Cursor, and a programming language, as well as walkthrough/flyover capability, tolerancing, and automatic roof, wall, and floor tools. A demo kit, consisting of two disks, manual, and video, is $19. 410/290-5114. Graphsoft, Columbia, Md.

311. Versatile awning
Built for commercial as well as residential use, the Variette combines the movable-shade features of a lateral-arm retractable awning with the rain- and wind-resistant protection of a fixed shelter. Wrap-around trolleys carry Sunbrella fabric on rollers down over a slightly-pitched support structure. Operation can be motorized. The Astrup Co., Cleveland.

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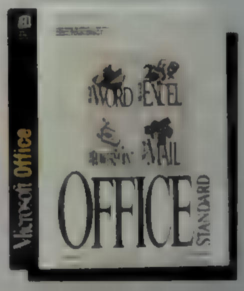

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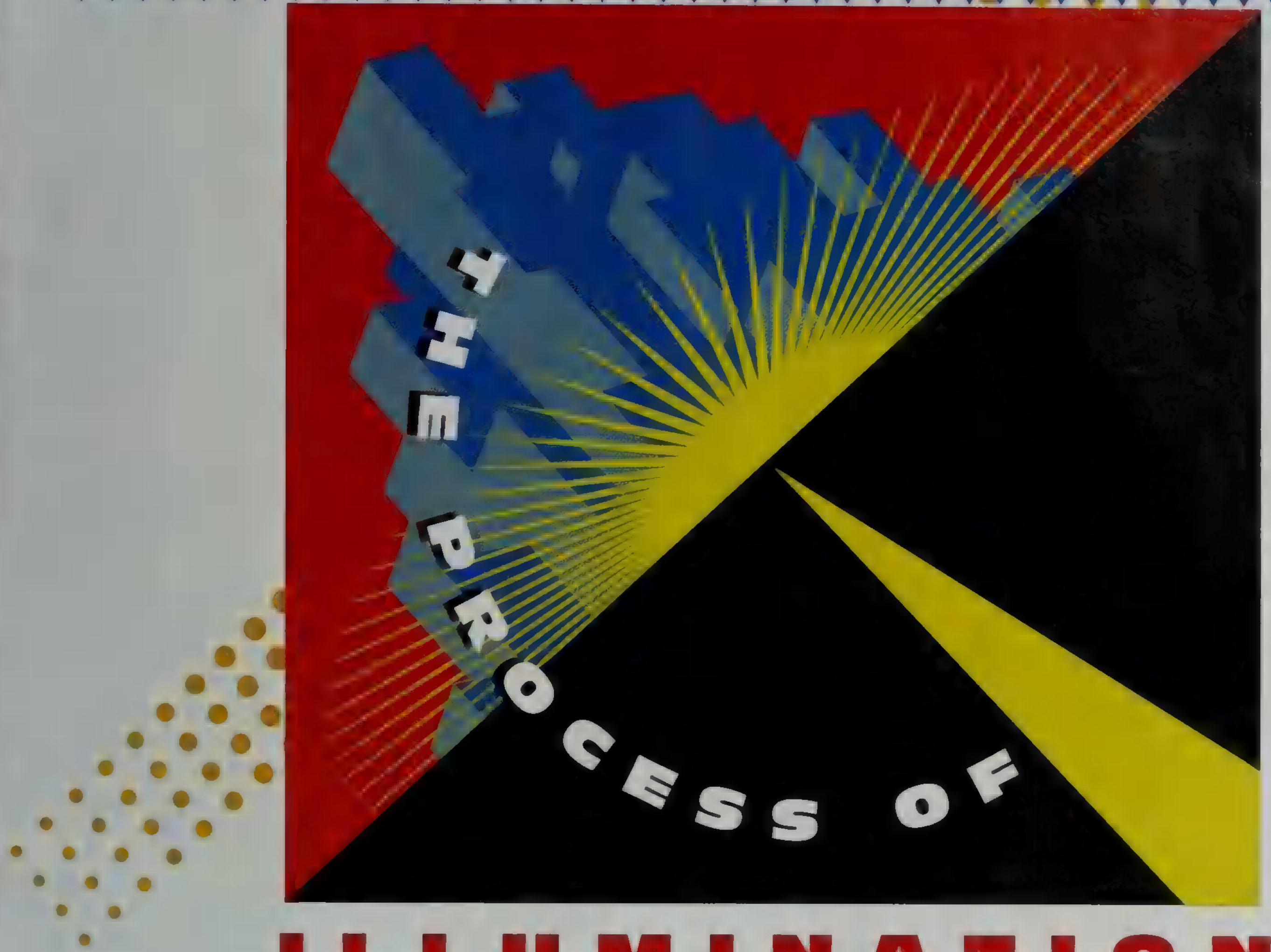

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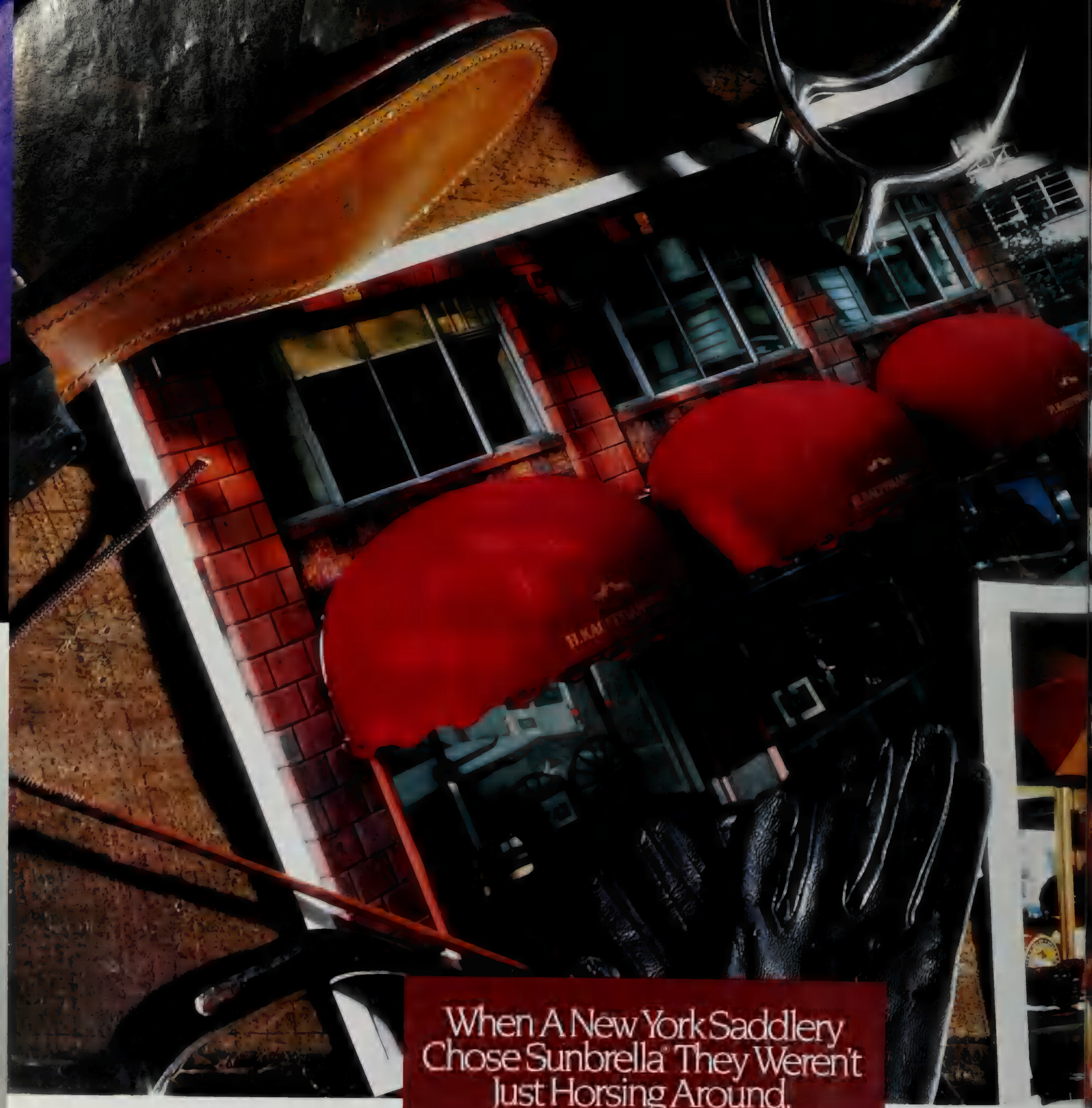

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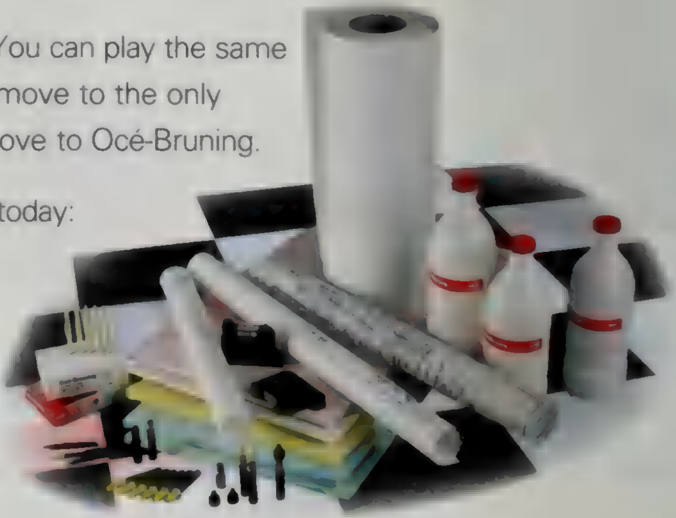

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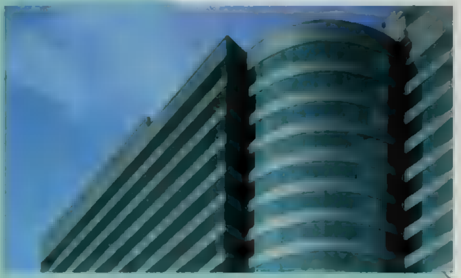

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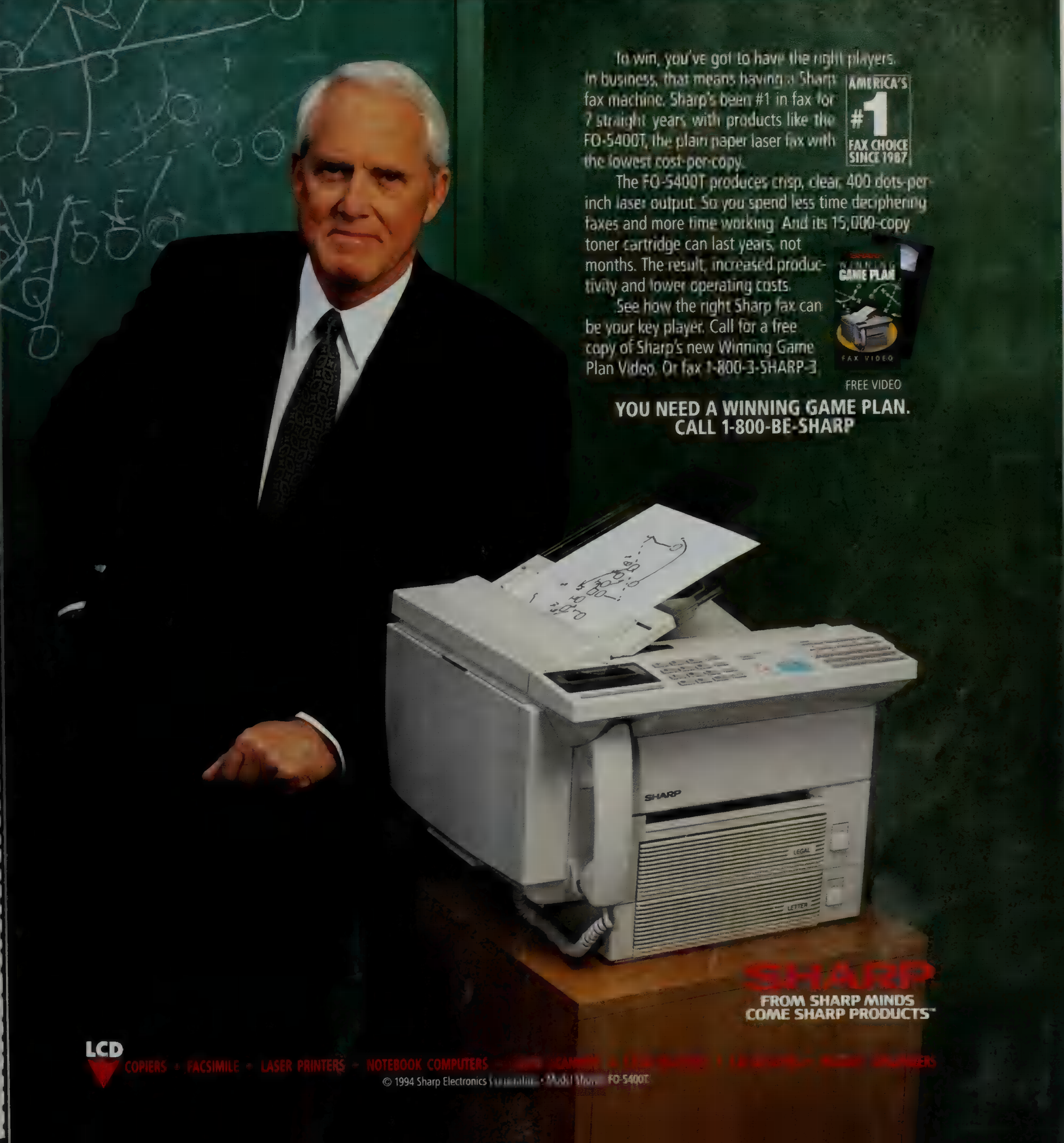

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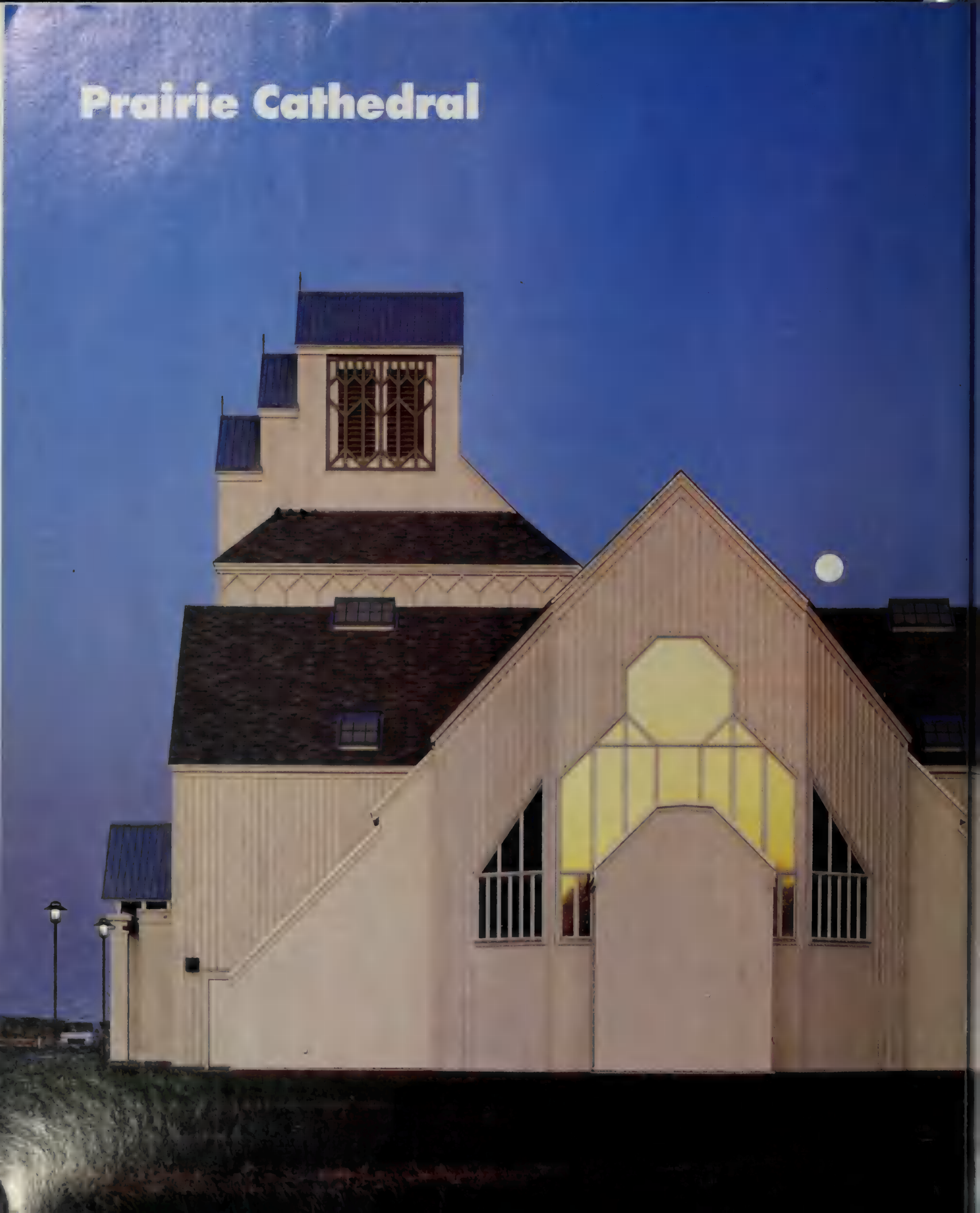
Two By Moore

Convinced that there's no finer way to pay tribute to the late Charles Moore than to let him speak through his architecture, RECORD this month brings you two of his most recent and in many respects most Moore-like completed projects—the upbeat cathedral for the Episcopal diocese of North Dakota in Fargo (page 60), and the engaging Palmer Museum at Pennsylvania State University (page 66). The cathedral is situated in the rugged northern Great Plains; the museum in the lush wooded hills of central Pennsylvania. But both show in their essence some of Moore's most endearing traits—creation of a powerful, almost magnetic sense of place; a celebration of the act of movement through space; minute attention to scale—that supplement to sheer size that in the hands of a masterful manipulator such as Moore can elevate movement into a stirring experience; the gift of sharing decision-making with the client and user during design so the building is in part *their* creation; and a simplicity of design and technical systems that is the ultimate emblem of genius.

Moore's spirit continues in the architectural offices and through the former students he influenced in his lifetime. Unlike other architects whose genius failed to survive them, Moore's heritage of humanism, self-effacement, and wry humor live on through those he affected so powerfully by his character and his architecture. *Stephen A. Kliment*

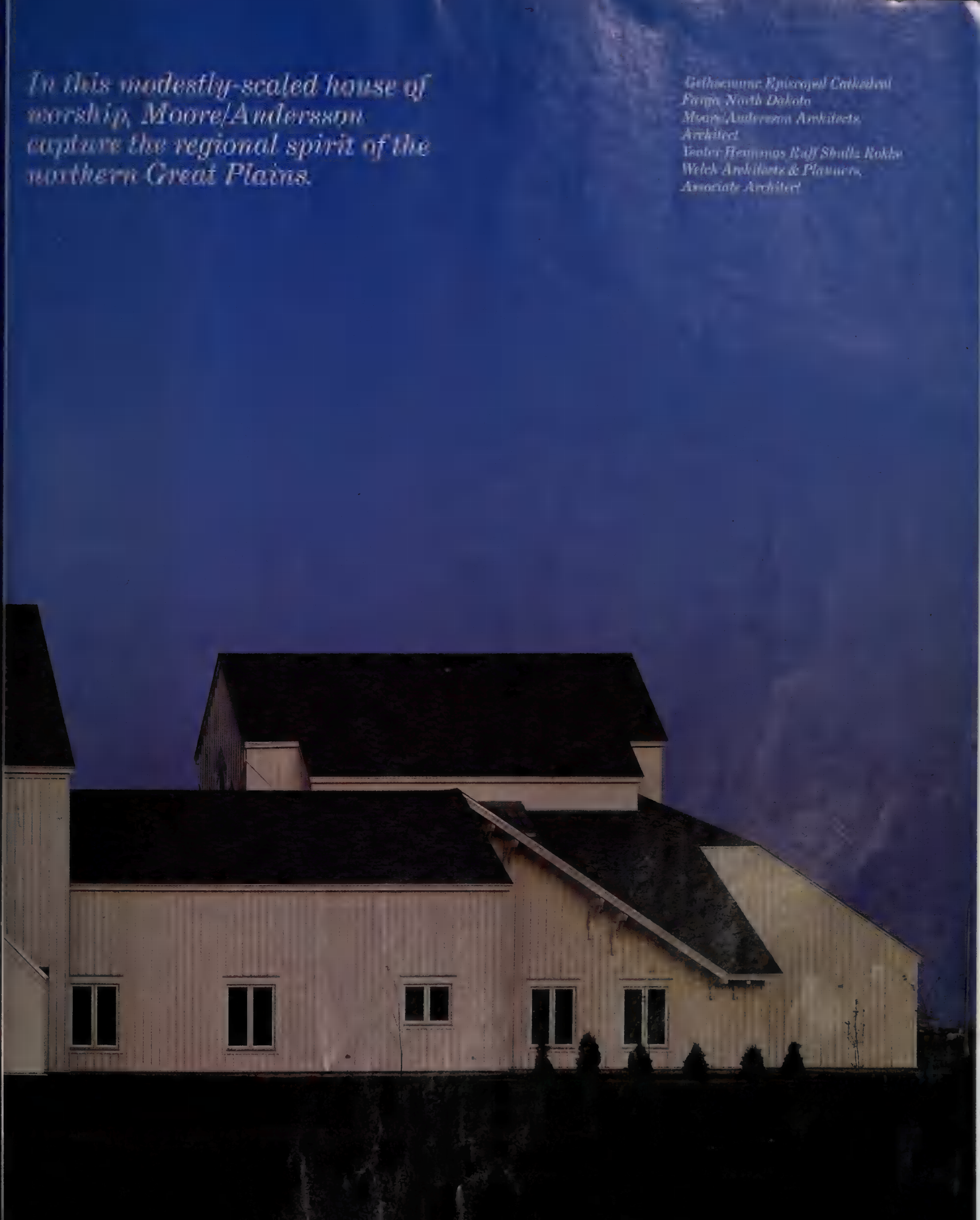
Manufacturers' Sources listed on page 103

Prairie Cathedral



In this modestly-scaled house of worship, Moore/Andersson capture the regional spirit of the northern Great Plains.

Gethsemane Episcopal Cathedral
Fargo, North Dakota
Moore/Andersson Architects,
Architect
Yeater Hennings Ruff Shultz Rokke
Welch Architects & Planners,
Associate Architect



Gethsemane Episcopal Church, the cathedral church of North Dakota, burned to the ground in the fall of 1989. The trauma this inflicted on the congregation led many of its members to a critical self-examination on how to rebuild, and caused those members to take an active and healing part in the process of building a new church. The site of the original church in downtown Fargo was an L-shaped landlocked one-acre lot with little chance for flexibility or expansion. Several liked the site because of its central location; others argued for moving to the open prairie south of town, a move that would signal a new beginning as well as serve expanding needs.

During a series of workshops, in which Charles Moore, Arthur Andersson and the design team played a vital role (the team was selected in part because of its experience with hands-on client workshops), the cathedral chapter, supported by the congregation, decided in favor of a 9-acre site on the open side of town at the edge of an expanding neighborhood. Over the next few months, there then emerged, under the architects' guidance, a new vision for the rebuilt church that took the form of a whitewashed board-and-batten cathedral on the prairie.

The sanctuary seats 350, and by using the Great Hall, double that number can attend special services, diocesan conventions, and occasional concerts. The scale of the other elements of the interconnected one-story floor plan is in harmony with the modest scale of the whole. There's a small chapel seating 40 that faces a cloistered courtyard; it's a more intimate place of worship away from the main sanctuary. After it is landscaped, the court will evolve into a metaphor of the Garden of Gethsemane from which the cathedral draws its name. The core is protected on the cold north side by a series of classrooms, library, youth facilities, and offices that serve the cathedral parish as well as providing for the diocesan needs of the Bishop. They are also a link to an expanding neighborhood.

Chief entry is from the south, through a white wooden portico surmounted by the bell tower (opposite). The entry is on the crossaxis, which joins the main axis at the narthex. Ahead is the cloister and small chapel; to the left the Great Hall, used for fellowship gatherings, and to the right the main sanctuary, arranged on a traditional central nave-and-transept plan.

Interior materials too are simple in line with the austere history of the region. Walls are concrete block; the sanctuary floor is lightly colored and scored poured concrete with carpet inserts; the ceiling is made of prefabricated wooden scissors trusses spanning 34 feet that serve as backdrops for a series of large inverted ceiling "trays". These are made of painted gypsum wallboard and serve to reflect sound and define the space of the sanctuary.

A special feature Moore brought to the building is the Memory Palace at the west end of the Fellowship Hall. The memory palace is a device he has used to great effect in the past to establish continuity from past to future. Here, it consists of various pieces salvaged from the burned church and used in the new church. For example, the lower half of the triptych window comes from the old church and was restored with new stained glass to form a Memory Palace at the west end of the Great Hall. Other pieces saved and reused are the altar, the 1971 butcher-block pews, the bishop's and dean's chairs, and the eagle lectern, which serves the small chapel (overleaf).

To a small Episcopal enclave in what is at heart Lutheran country, Moore/Andersson have brought identity, tradition, continuity, and grace. *Stephen A. Kliment*

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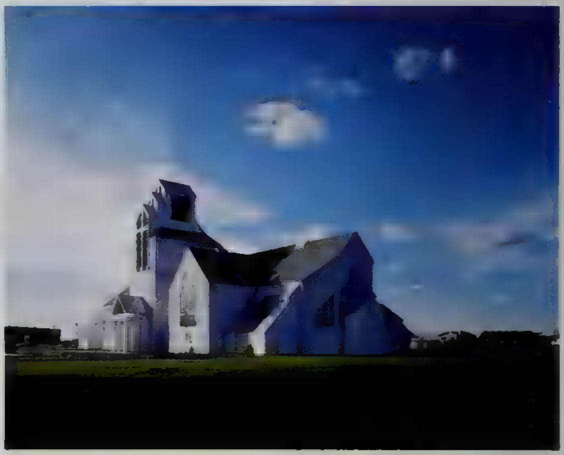
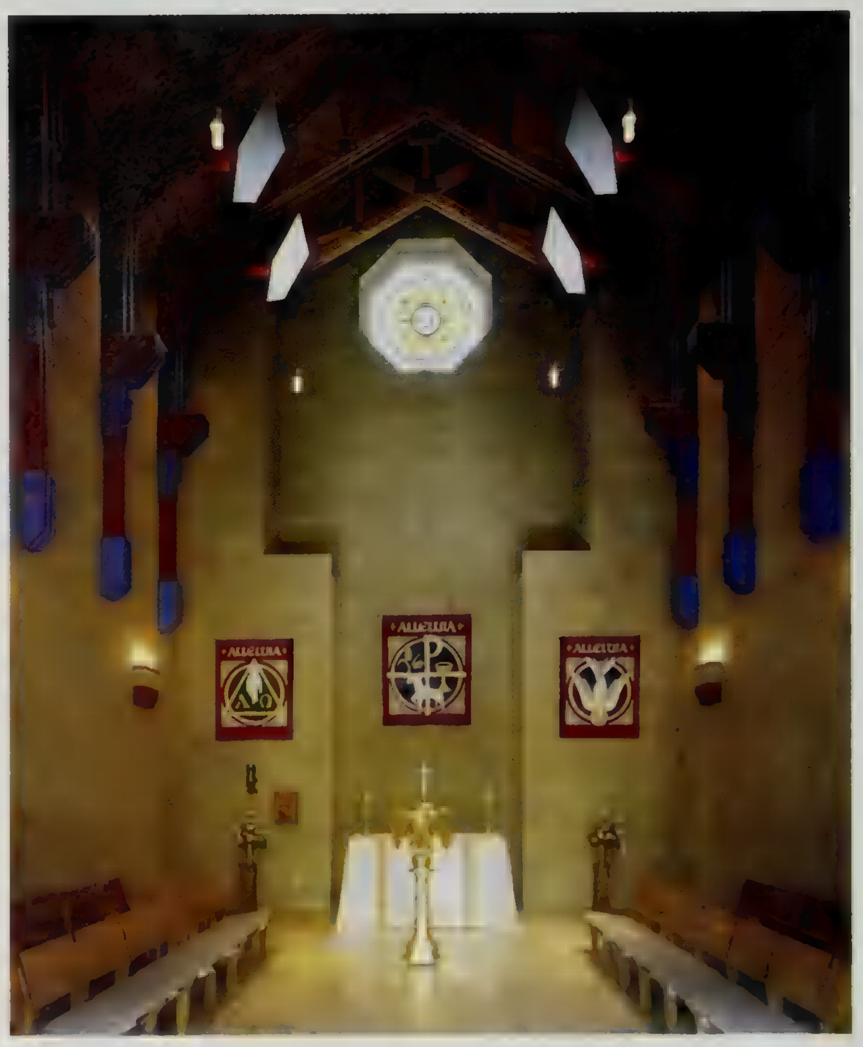
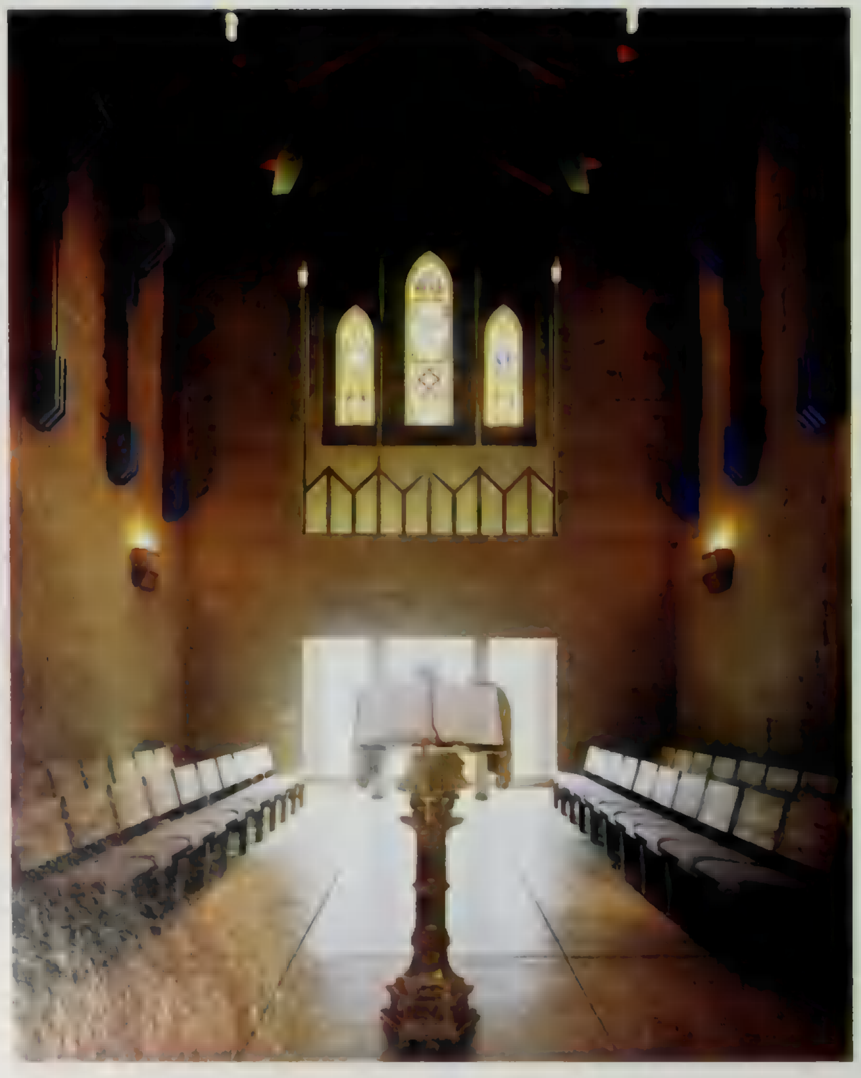


The Gothic profile and massing of the cathedral (top) has as backdrop the fast-developing neighborhoods on Fargo's south edge. To the right of the east front, with altar behind (above), are offices and classrooms.

Up Close

"The cathedral has all of the characteristics of a Gothic building, yet it looks like it belongs on the prairie," says Cathedral Dean Frank Clark. The process followed to arrive at this result is a key to the spirited acceptance of the building by the congregation. It began with the choice of architect. "We selected Moore/Andersson because they were strong designers, yet they didn't come to town with a lot of preconceived ideas," adds Father Clark. "We also valued their past experience with conducting workshops." This intense process spanned four months and allowed the congregation to develop a vision of the church and its role, which is to serve the community, with its strong academic component; provide spiritual uplift; and signal continuity from a tragic event. The vision also covered the choice of site, which symbolically is in the path of a growing residential neighborhood. The altar, pews, and other appointments are all movable: "We realized," says Father Clark, "that the next generation's needs may differ from ours."



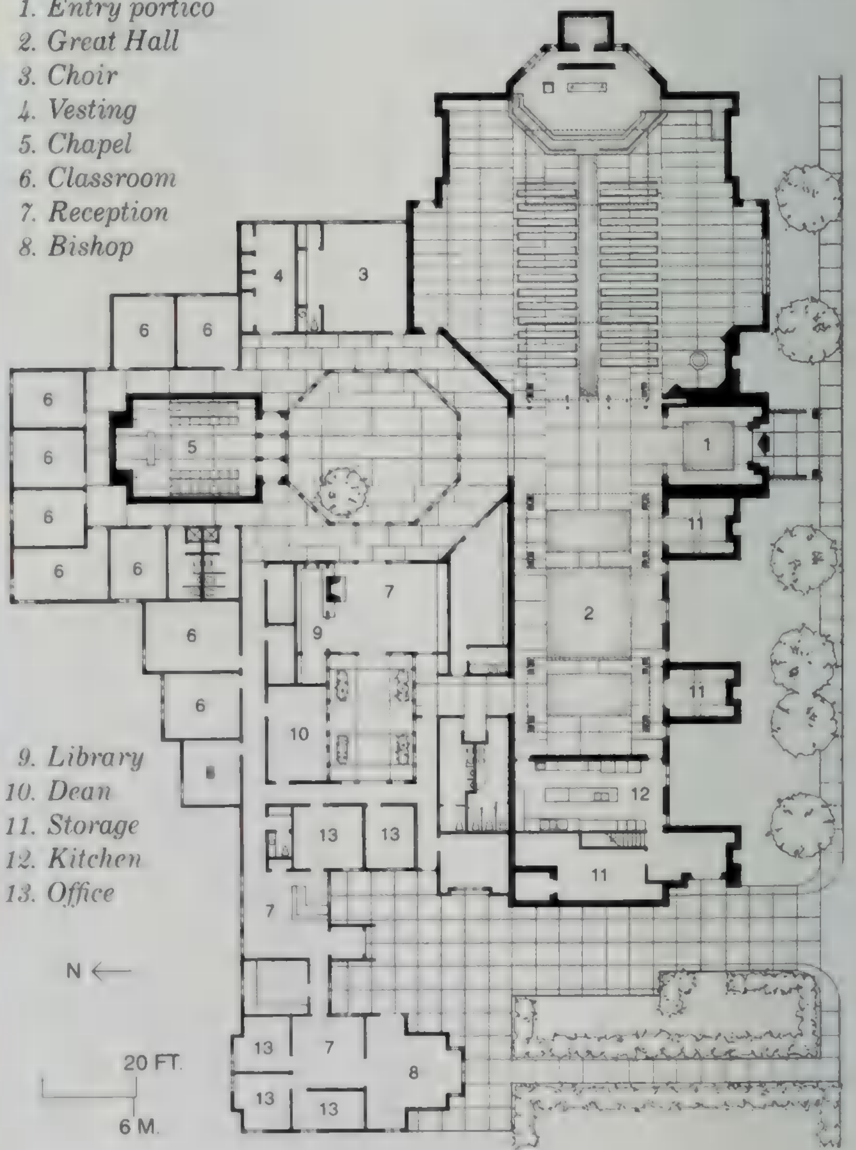


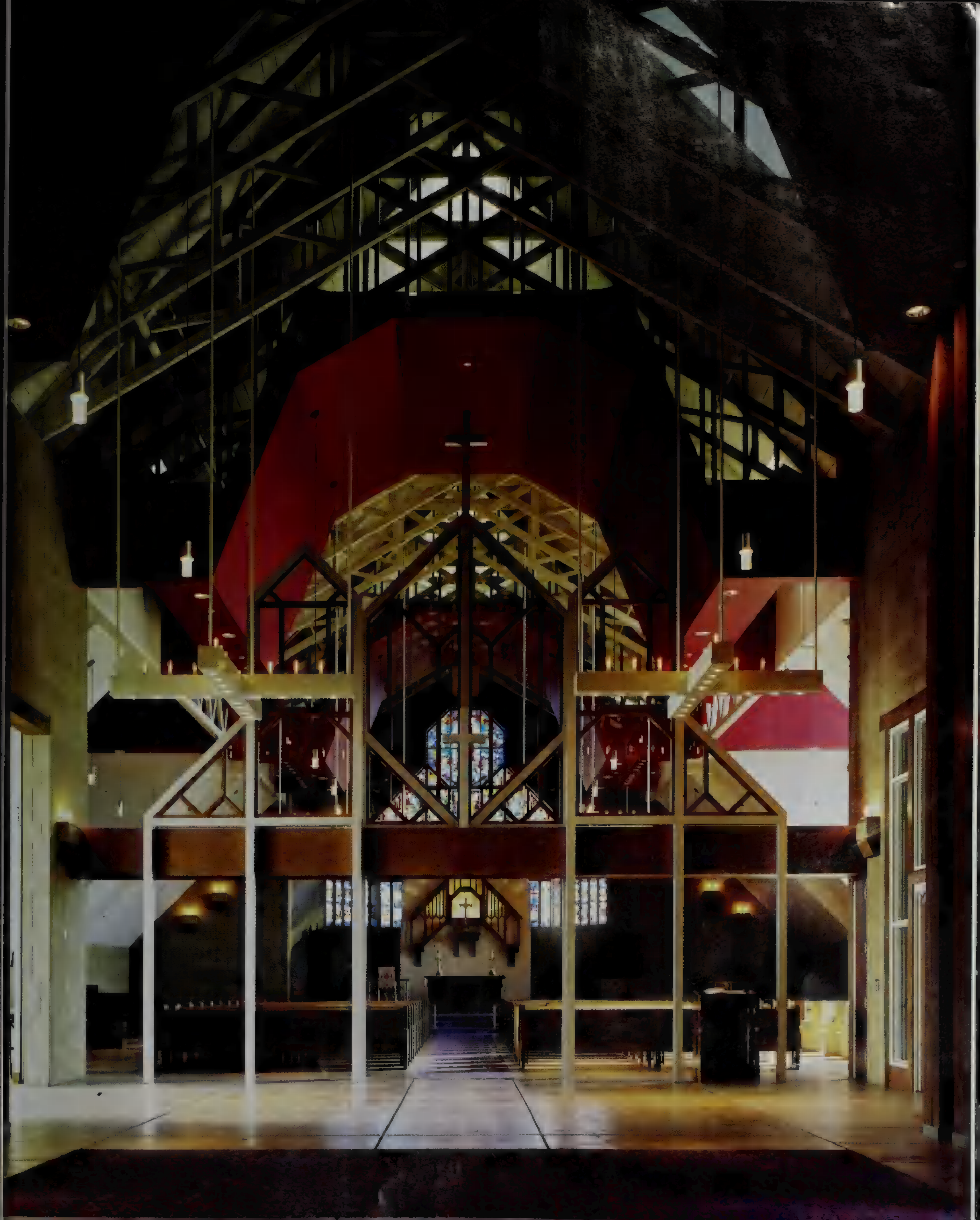
A chapel seating 40 (left) provides an intimate setting for worship. The south end of the chapel (bottom left) faces a cloister that serves as a source of daylight for surrounding spaces. The eagle lectern was rescued from the old cathedral. The view east along the nave towards the cathedral altar (opposite) shows prefabricated wood scissors trusses and ceiling "trays" made of painted gypsum wallboard. Doors can roll out to shut off the sanctuary.

The 21,000-square-foot project cost $2.2 million. Walls are load-bearing 8-inch reinforced concrete block with 4-inch interior block facing. Exterior board-and-batten is backed up by wood studs. The floor is lightly colored and scored poured concrete. Parking accommodates 150 cars.

Credits
Gethsemane Cathedral
Fargo, North Dakota
Owner: *Gethsemane Cathedral*
Architect: *Moore/Andersson Architects—Arthur Andersson, partner-in-charge; Charles Southall, project architect; Mercedes de la Garza, designer*
Associate Architect: *Yeater Hennings Ruff Shultz Rokke Welch Architects & Planners—Richard Hennings, David Shultz, Leslie Gooch, Margaret Kritzberger, project team*
Engineers: *Heyer Engineering (structural); Buth Engineering (mechanical); Laugtug Hanson Associates Engineers (electrical)*
Consultants: *Peters & Myer—Illumination Design Collaborative: Richard C. Peters, Jan P. Myer (lighting); Marion Hatchett (liturgical); Jim Burns (workshop administrator)*
Construction Manager: *Yeater Hennings Ruff Shultz Rokke Welch (D. Shultz, proj. manager)*

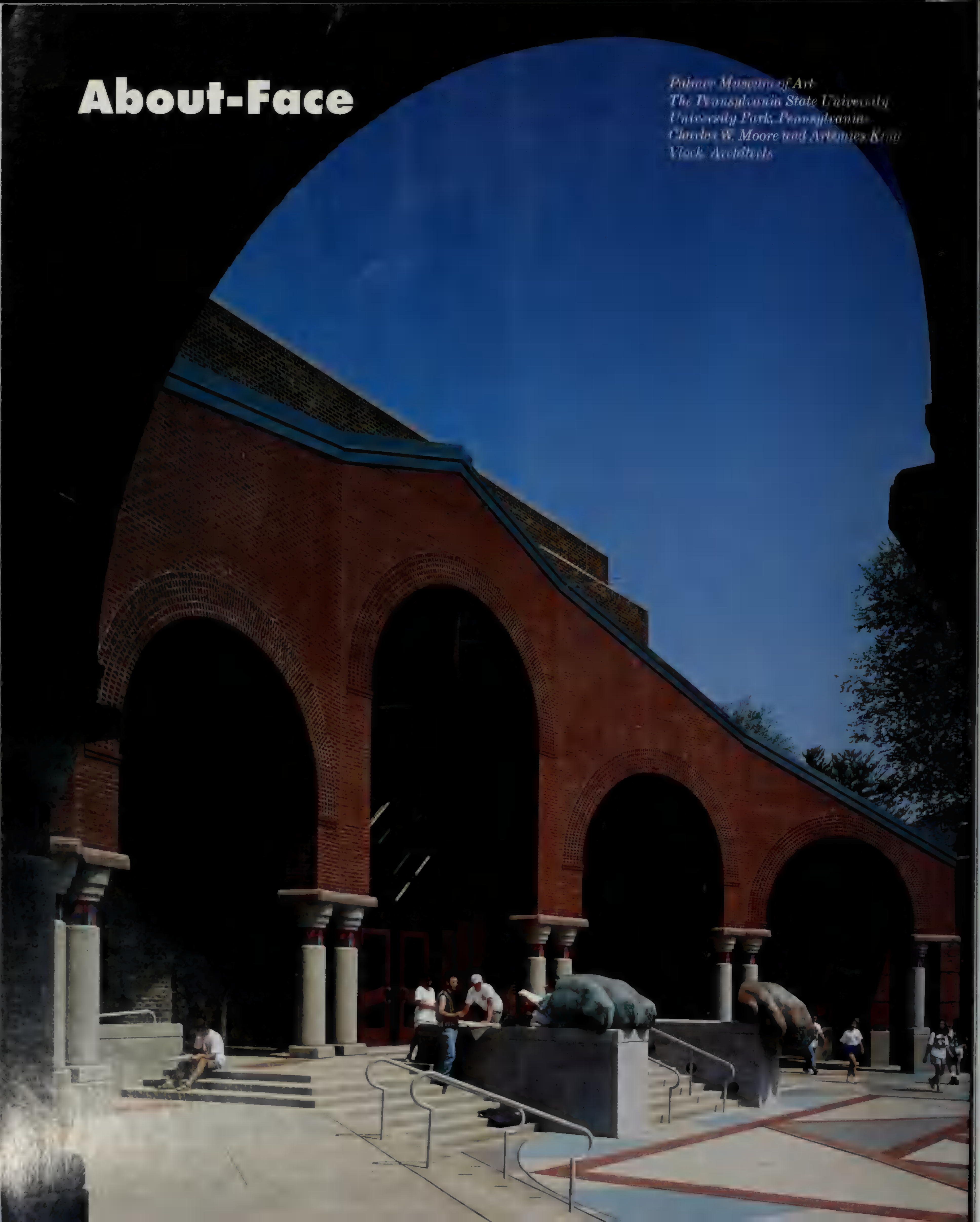
1. Entry portico
2. Great Hall
3. Choir
4. Vesting
5. Chapel
6. Classroom
7. Reception
8. Bishop
9. Library
10. Dean
11. Storage
12. Kitchen
13. Office





About-Face

Palmer Museum of Art
The Pennsylvania State University
University Park, Pennsylvania
Charles W. Moore and Arbonies King
Vlock, Architects



Once a wallflower hiding behind the skirts of its big sister, the Palmer Museum has been magically transformed by Charles Moore and the firm of Arbonies King Vlock into a star attraction on the Penn State University campus. Given a new public face and orientation, as well as a two-story gallery wing, the museum is now a favorite place for hanging out and meeting people.

The original museum, a charmless brick box completed in 1972, was really just an appendage of the more prominent Visual Arts Building. A glass-enclosed breezeway connected the two buildings, making their dependent relationship clear. Entered through this glazed umbilical cord, the facility lacked its own identity and was an almost invisible presence in one of the busiest parts of campus. In hiring Moore, the first out-of-state architect to work at Penn State, the building committee and donors made it clear they wanted to create an institution with a much higher public profile. Moore immediately invited his old colleagues Glenn Arbonies, Richard King, and Sandra Vlock to work with him on the project (see Up Close, next page).

As they like to do, the architects brought the clients and users into the design process. In a one-week public workshop held on campus, the architects worked with students, faculty members, museum staff, administrators, donors, and even save-the-trees advocates to develop schematic drawings and models for the new museum. The schematics were further developed later, but the key elements of the final building were all set at that workshop, states Arbonies. By engaging all of the important players at one time, the architects were able to get agreement on controversial issues such as adding a new component to the program: a front loggia that would act as a Romanesque billboard announcing the new building's presence on campus. "It was the workshop that changed the project from a museum addition to something much greater," explains Vlock. Commenting on the participatory design process, museum director Kahren Arbitman says, "The more people we could get excited about the building, the easier it would be for us down the line."

While the existing museum and Visual Arts Building turn their backs on Curtin Road, the main thoroughfare through the area, the new museum greets the road with its arched loggia and a plaza that serves as an outdoor lounge for the campus as a whole and a welcome mat for the museum in particular. "This is an embracing, place-making building," says Arbonies. Instead of trying to match the brick of the existing museum, the architects selected a warmer brick as a subtle contrast to the old building. The new brick also picks up the color of a small building across the street that charmed the architects and became the inspiration for the new museum's Romanesque vocabulary.

Like many of Moore's buildings, the Palmer Museum celebrates the act of moving through it—using giant corbeled projections that direct visitors from lobby to gallery wing and featuring projecting portals between the galleries themselves. As a reminder of the impact of old on new, the portals between galleries are angled to pick up lines from the existing museum. While the lobby is a tall, exuberant space with two-story-high windows facing a sculpture garden to the south, the galleries are windowless rooms that focus attention on the artwork, not the architecture. Cove ceilings and Classical proportions help establish a subdued setting, which is gently tweaked by projecting portals and an angled path between galleries. Taking advantage of the existing building, the architects used its ground floor for a 150-seat auditorium and its upper floors for offices and storage. Built for just $5.6 million, the 25,000-square-foot addition makes the most of "brick, wallboards, and smoke and mirrors," says Arbitman proudly.
Clifford A. Pearson

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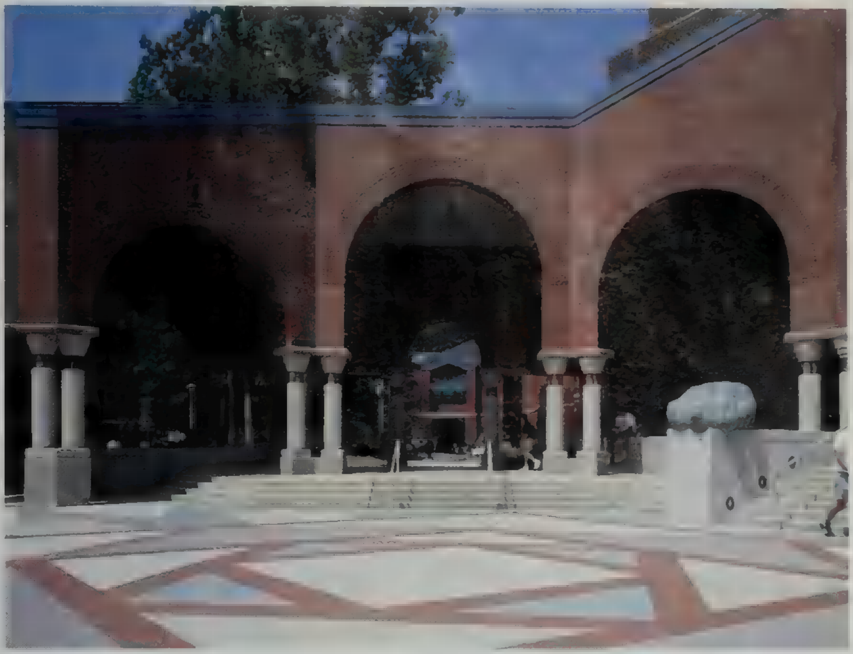
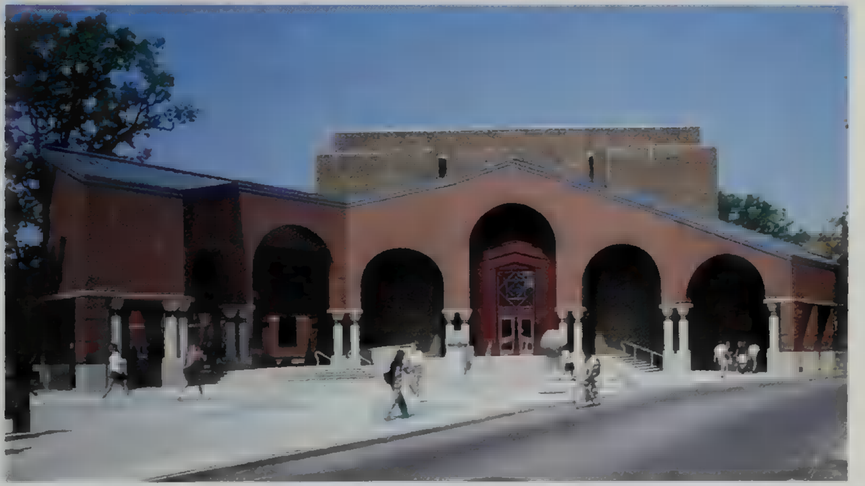
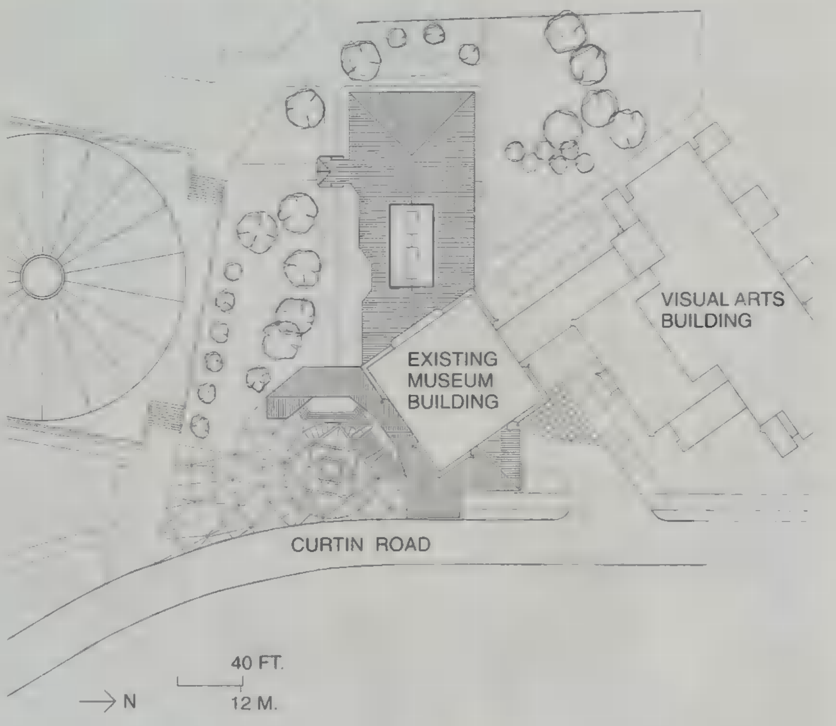
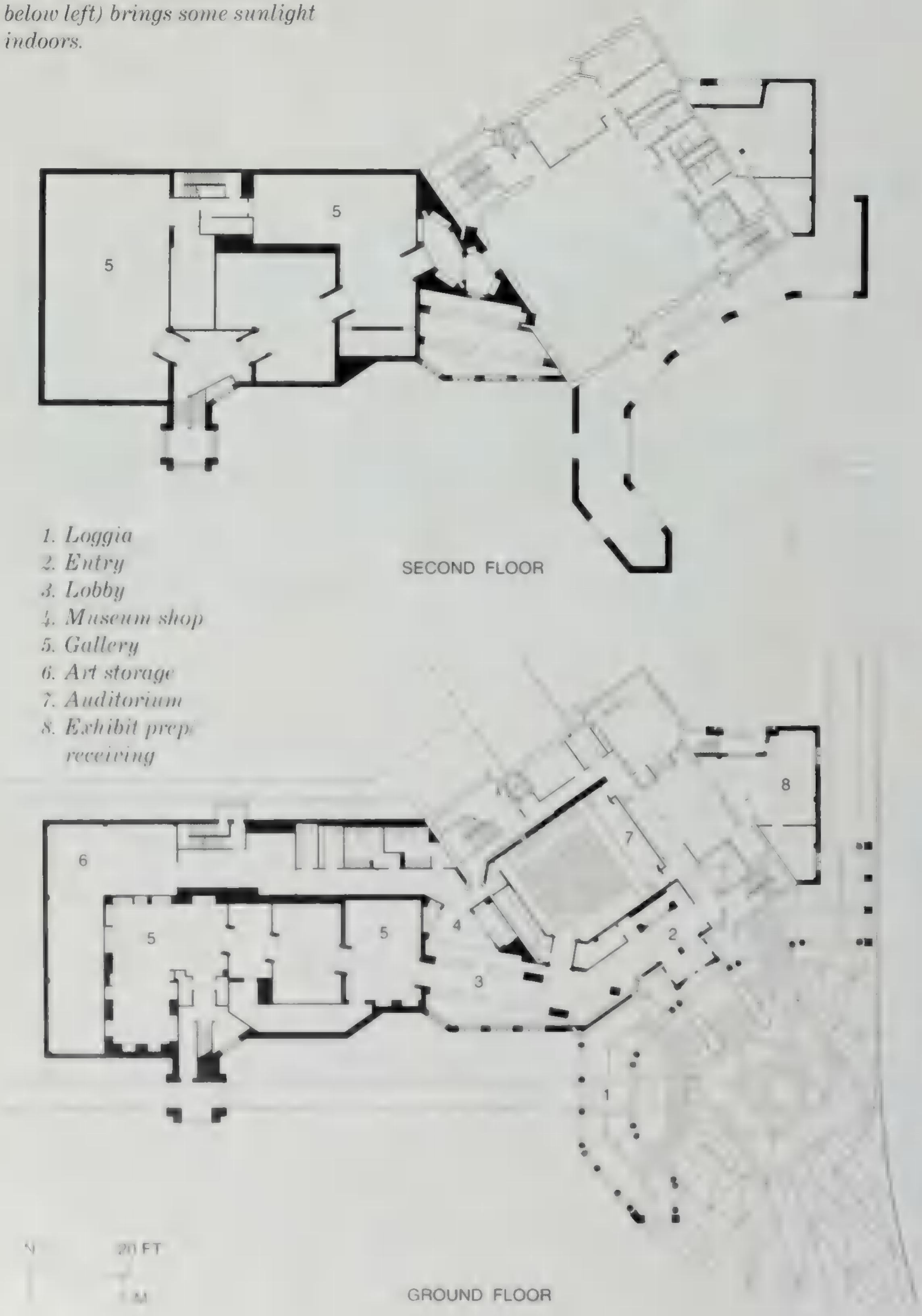






Lion paws by Paul Bowden add a whimsical touch to the museum's entry (opposite). Broken-brick arches of the loggia (top) contrast with the old museum (background of photo above).

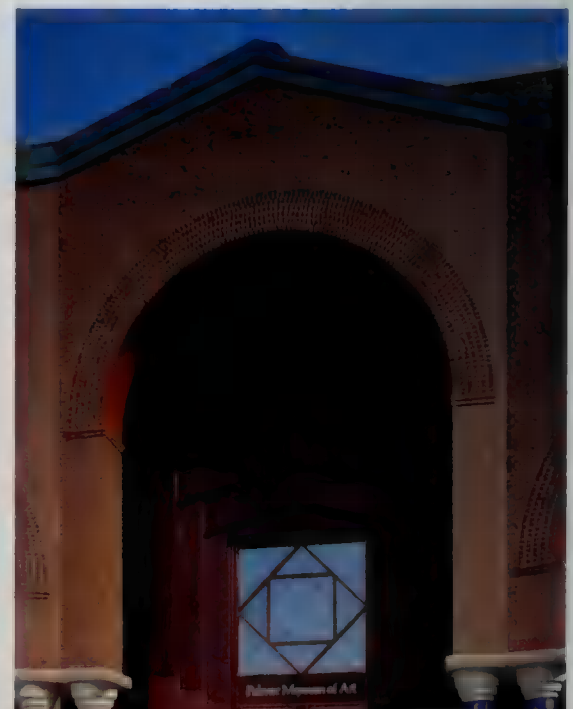
A steel-frame structure, the museum is clad in brick and heavily insulated for interior climate control. Cast-concrete columns are topped with glass tiles and precast trim (opposite top). The square-within-a-square design above the entry (below) is a recurring motif used in the plaza and the museum. Although the galleries have no windows, a stair tower (opposite below left) brings some sunlight indoors.

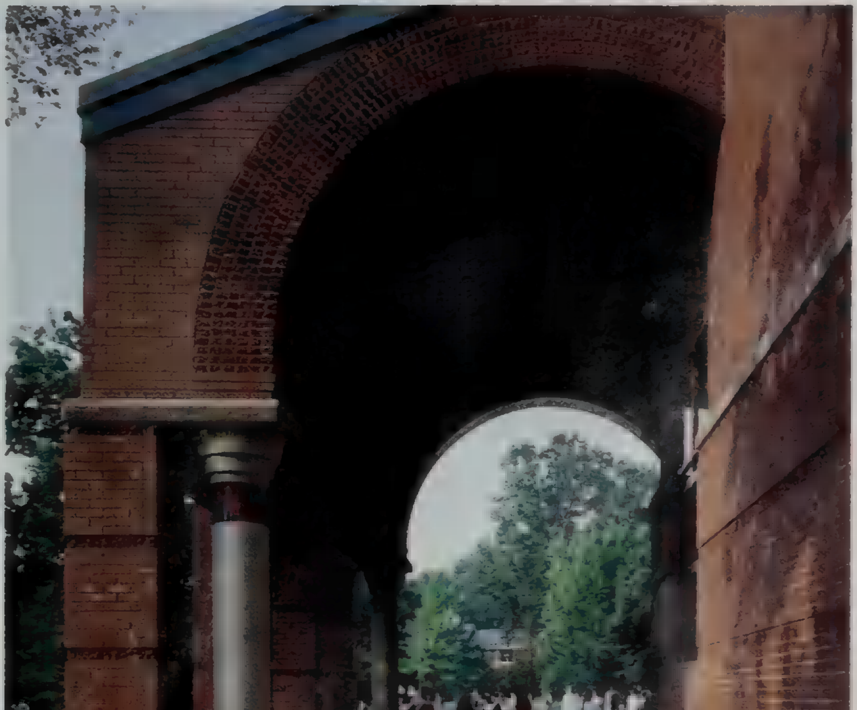


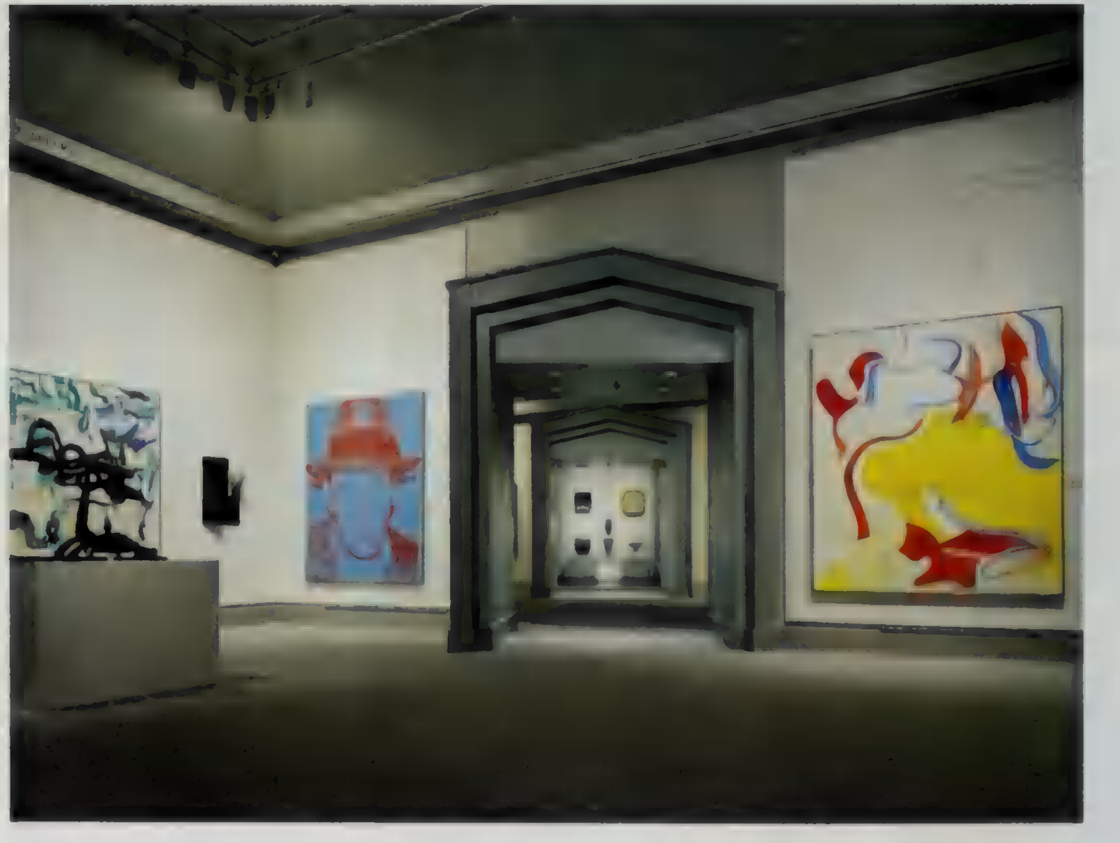
Up Close

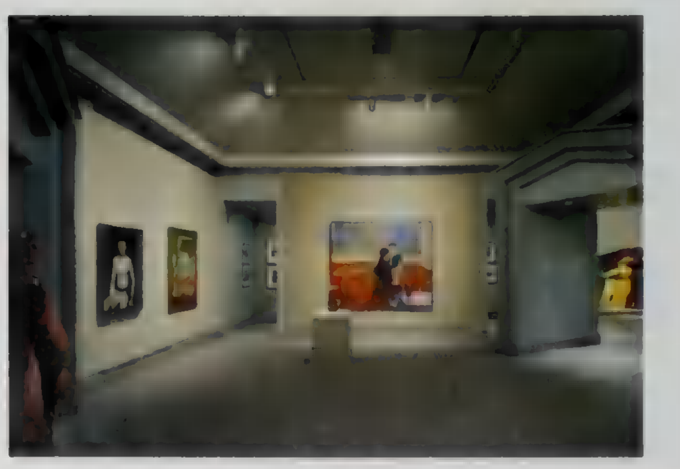
One for all and all for one.

Collaborating with other architects was always Charles Moore's preferred work style. Famous for the many firms he spawned and careers he nurtured, Moore saw architecture as a group effort. His ties with Glenn Arbonies, Richard King, and Sandra Vlock went back to his years in Connecticut at Moore Grover Harper and Centerbrook Architects, where Arbonies was a partner, King was a senior associate, and Vlock a design consultant. Arbonies and King worked with Moore on three previous museum projects: the Hood Museum at Dartmouth College, the Williams College Art Museum, and the Cedar Rapids Museum of Art (on which Vlock also worked). Vlock (whose father, James, was chairman of the nonprofit organization that hired Moore to design the award-winning Tower One and Tower East elderly housing projects in New Haven) actually grew up in a house with a basement remodeled by Moore. Talking about the participatory design workshops that Moore used often during his career, Vlock explains, they are "choreographed but also spontaneous—like street theater." Moore's role in these workshops, says Arbonies, was as "band leader and pied piper." Looking back on Moore's illustrious career as a collaborating architect and educator, Vlock states, "Charles Moore had so many lives and so many progeny. We're all his children."







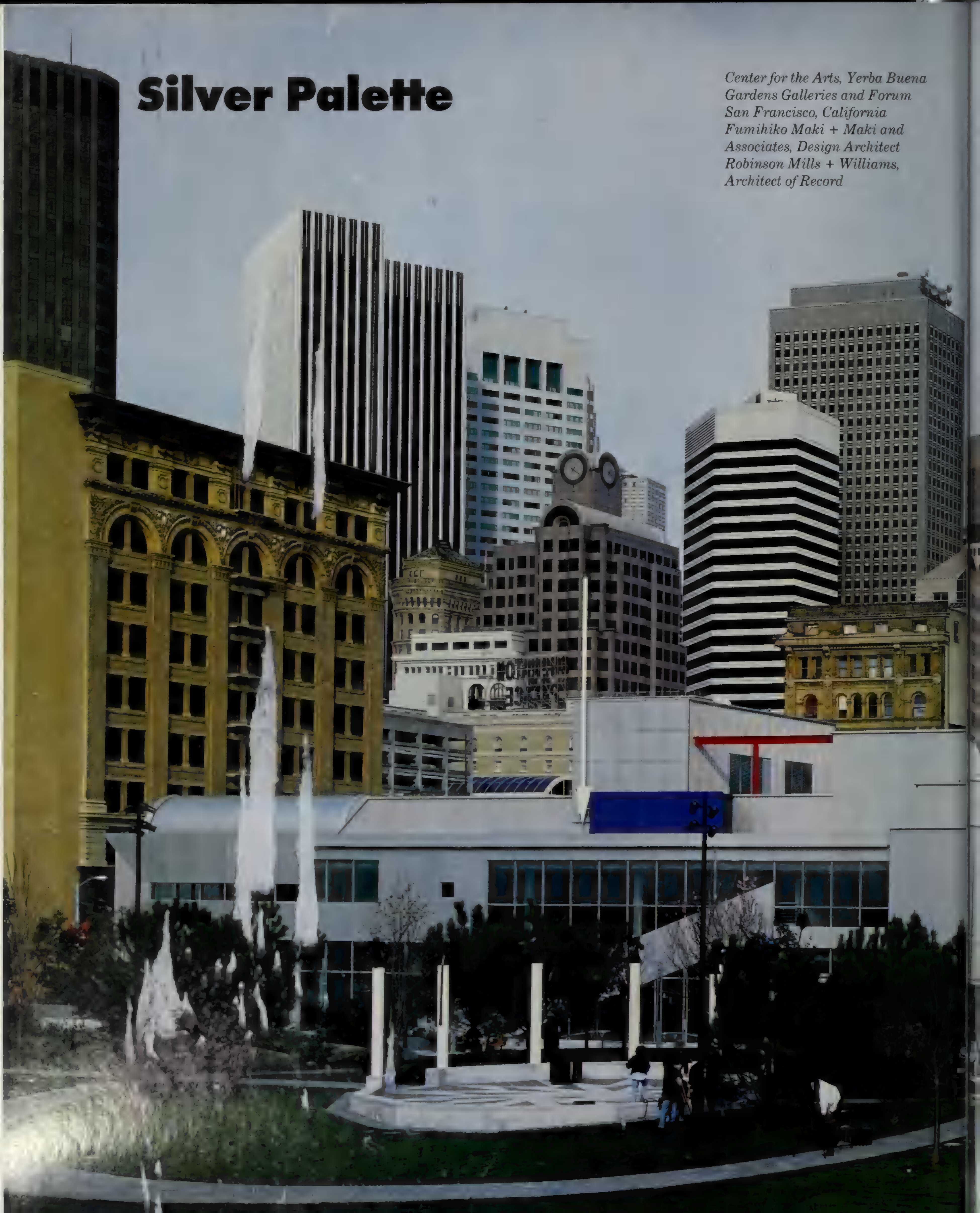


Because utility lines restricted the location of the bulk of the new building, the museum entrance is not particularly close to the start of the gallery wing. But the architects turned this liability into one of the strongest aspects of their design, creating a visual romp out of an extended walk from museum entry to gallery entry. As visitors enter the museum, they are greeted by a Lisa Scheer sculpture created especially for the space and a view of the great lobby windows in the distance (top left). The lobby itself is animated by corbeled projections leading toward the entrance to the gallery wing (opposite). The nonstructural projections, which approximate the form of great arches, were made of steel framing and plywood, then sprayed with fireproofing and deeply scored to look like huge blocks of stone. Galleries were designed as rooms for viewing art and so were kept simple and windowless (left bottom). Projecting portals between galleries act as transition spaces between rooms containing different periods of art (left middle).

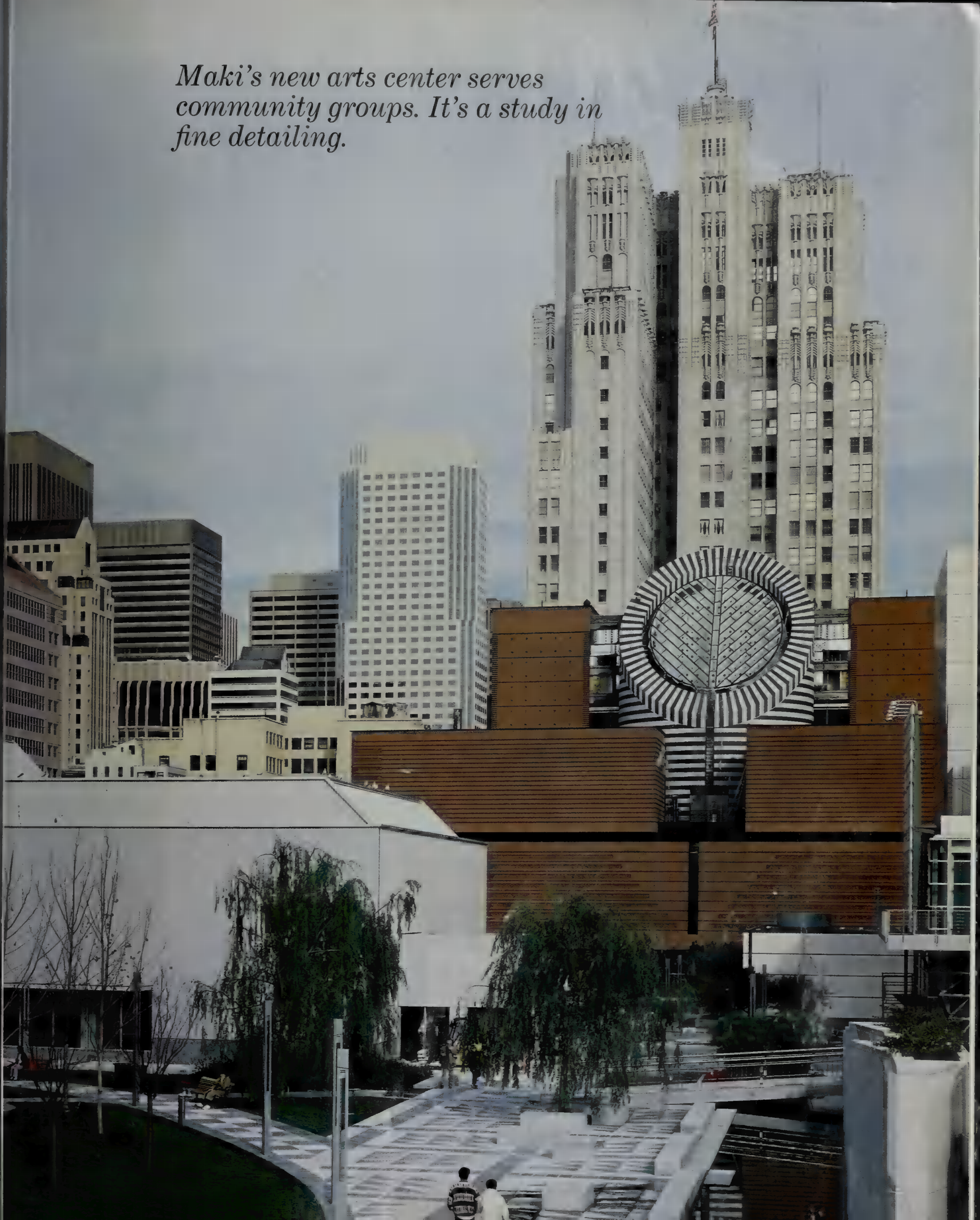
Credits
Palmer Museum of Art
The Pennsylvania State University
University Park, Pennsylvania
Owner: *The Pennsylvania State University*
Architect: *Charles W. Moore and Arbonies King Vlock—Charles W. Moore, Glenn W. Arbonies, Richard L. King, Sandra E. Vlock, design partners; Arthur Andersson, special consultant*
Engineers: *Besier Gibble Norden (structural); Gary Johnston & Associates (mechanical/electrical)*
Consultant: *Chapman Ducibella Associates (security)*
General Contractor: *Cumberland Contracting Group*

Silver Palette

Center for the Arts, Yerba Buena Gardens Galleries and Forum
San Francisco, California
Fumihiko Maki + Maki and Associates, Design Architect
Robinson Mills + Williams, Architect of Record



Maki's new arts center serves community groups. It's a study in fine detailing.



San Francisco is a city that I have known and loved ever since my first visit in the mid 1950s," says Tokyo-based architect Fumihiko Maki. While he may not have left his heart there, the Pritzker Prize winner has graced the Golden Gate city with the Center for the Arts Yerba Buena Gardens Galleries and Forum, his first major American project.

A collaborative effort with Robinson Mills + Williams, the new building occupies an L-shaped lot within the Yerba Buena Center, a 25-acre arts and entertainment mecca just a stone's throw from the city's downtown. The Center, which replaced blighted residential hotels and rundown industrial buildings, is the product of a three-decade-long debate over the use of the site. Though the property was originally slated for commercial development with minimal arts facilities, the balance shifted in1981 when the Moscone Convention Center was built underground, freeing up land at grade for cultural amenities. Designed independently by an all-star cast, the Center's components include a theater by James Stewart Polshek, Mario Botta's San Francisco Museum of Modern Art (under construction), as well as the landscaped Esplanade Gardens by Romaldo Giurgola. Additional facilities, such as the Mexican Art Museum and a mixed-use cinema complex, are planned.

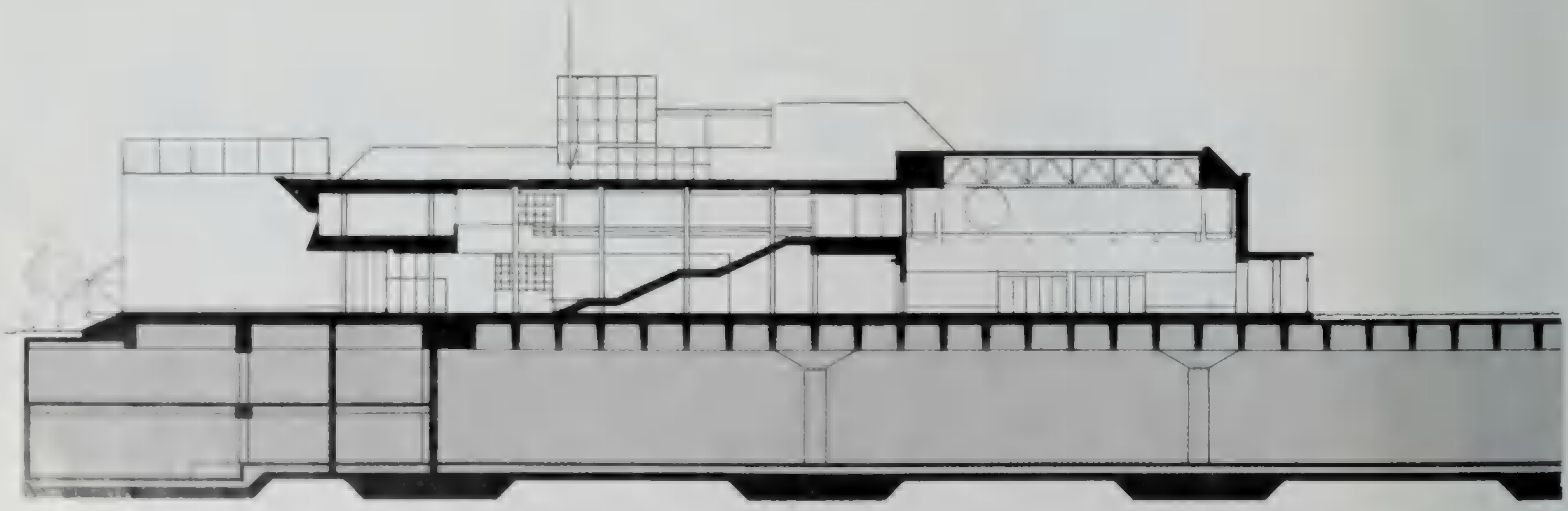
Billed by Maki as a "kunsthalle," the 58,000-square-foot Galleries and Forum is not a museum per se since it does not have a permanent collection. Instead, it houses an array of flexible exhibition spaces that can be rented for a song by the 200-odd arts groups that call the Bay Area home. Equipped for all manner of visual and performing arts, the building includes three galleries of different size and character, a forum for theatrical and dance presentations as well as lectures and banquets, and an 84-seat state-of-the-art screening room—all linked by a double-height, glazed lobby overlooking the Esplanade.

"My whole idea is that inside and out should not be completely closed or segregated," explains Maki. Indeed, floor-to-ceiling window walls and skylights blend the internal life of the building's primary spaces with the surrounding city. Even the glass-enclosed passageway linking the two first floor galleries, which doubles as an auxiliary display space, engages passersby with its views of artwork and gallery-goers inside. The need to protect works of art, however, dictated the use of double-paned insulating glass with a suspended polyester, low-emissivity film to block harmful ultraviolet rays and control heat-gain throughout the building. Ceramic fritted glass provides additional shading for the upper lobby. And a host of sliding panels, motorized shades and louvers enable artists to tailor the flow of daylight into each space.

Maki's meticulous attention to detail not only contributes to the building's operation but also to its quality of construction. The architects painstakingly reviewed full scale mock-ups and models of everything from stair rail to curtain wall before allowing fabrication to proceed. Great care was taken even to locate switchplates and air grilles as artfully as possible. And by working closely with the U.S. manufacturer, the architects were able to create a close facsimile of Maki's signature aluminum panels. The panels' asymmetrical profile was custom designed to catch the brilliant California sun. Adherence to exacting standards is a Maki trademark, whether the project is in the U.S. or Japan. Even the courtyard's translucent glass block from Japan had to be scrutinized to ensure a consistent milky color.

The aluminum panel system which clads the building was chosen in part for its lightness — the Galleries and Forum sits literally on top of the long span Moscone Center. Using pin connections, the new building's "ductile moment frame" transfers its load directly to the ribs of the convention hall's waffle slab below, without transmitting moment forces. To minimize point loads, the height of the structure was kept low and uniform. And because subterranean space was unavailable, all service and mechanical rooms had to be located on the ground floor and roof. Visible to the inhabitants of high-rise buildings nearby, the roof was as carefully composed as a fifth elevation. Covered with grey concrete pavers set at a 45 degree angle, the roof's surface is a striking contrast to the city's rectilinear grid.

By pushing existing technology to its limits, the architects have created a building that is, in Maki's words, "an expression of its time." By selecting a world-class architect such as Maki, San Francisco has drawn international attention to the Galleries and Forum. This too, is an expression of our time. *Naomi R. Pollock*



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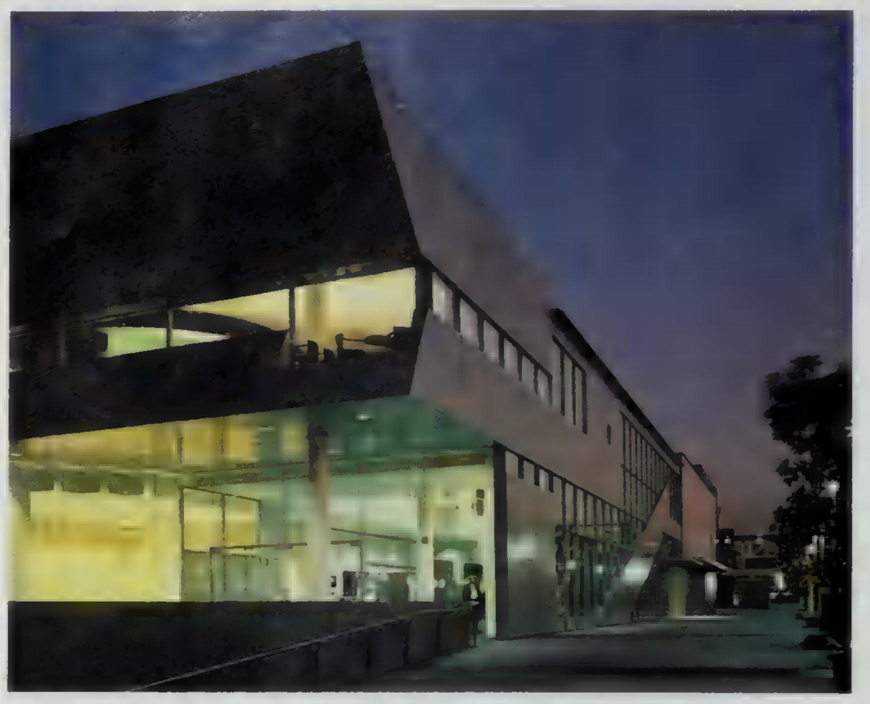
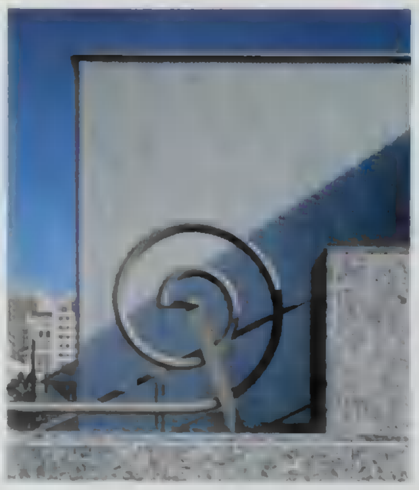
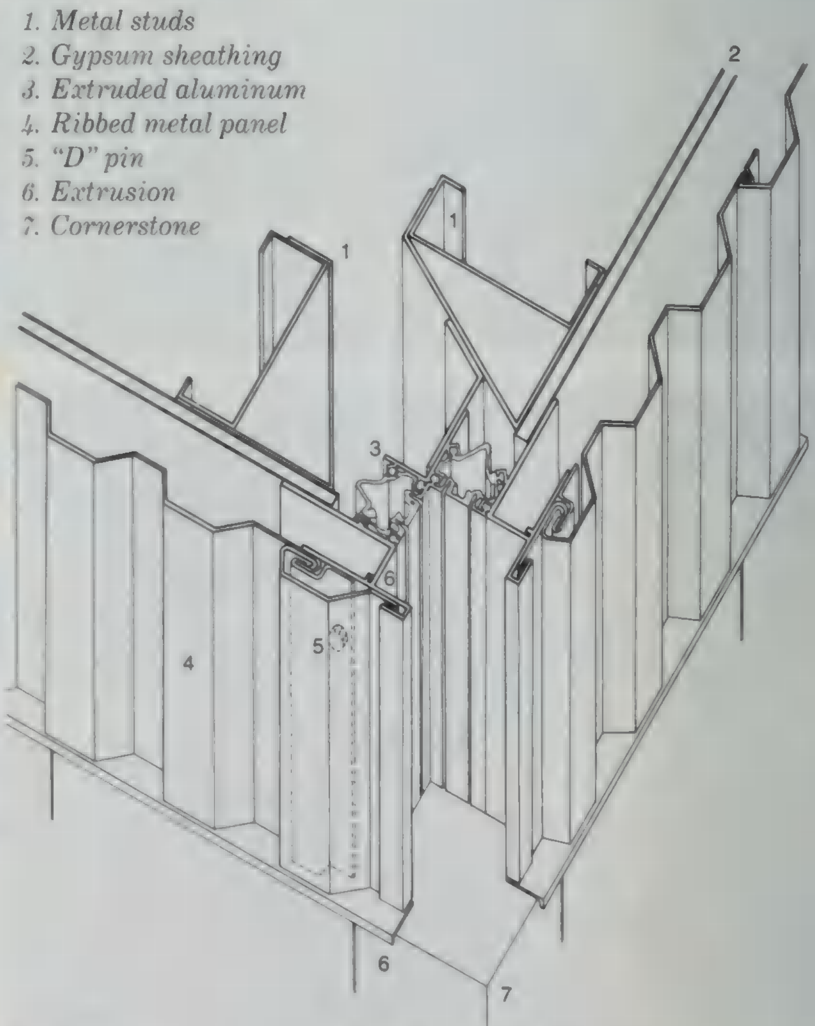


Up Close

Prior to the construction of the Galleries and Forum, many art groups used nearby industrial buildings for exhibitions and performances. Taking this into account, Maki initially conceived of the building as an "elegant factory," clad with corrugated aluminum but detailed and finished in a refined manner. No stranger to the aluminum panel, Maki has used the material for several projects in Japan including the recently completed Hillside Terrace Complex Phase 6 and the YKK R+D Center. This time, the architects worked closely with a U.S. manufacturer to create 121, wide panels of continuous length that shimmer in the sun with their asymmetrical, ribbed profile. Made from roll formed .040-in. thick aluminum, the interlocking panels are joined with concealed fasteners that give the building's skin its seamless appearance. The entire surface was covered with a "Maki Silver" custom colored resinous metallic coating. While seismic constraints are less stringent in San Francisco than Tokyo, they still required the open corner joints that allow the panels to move independently in the event of an earthquake.

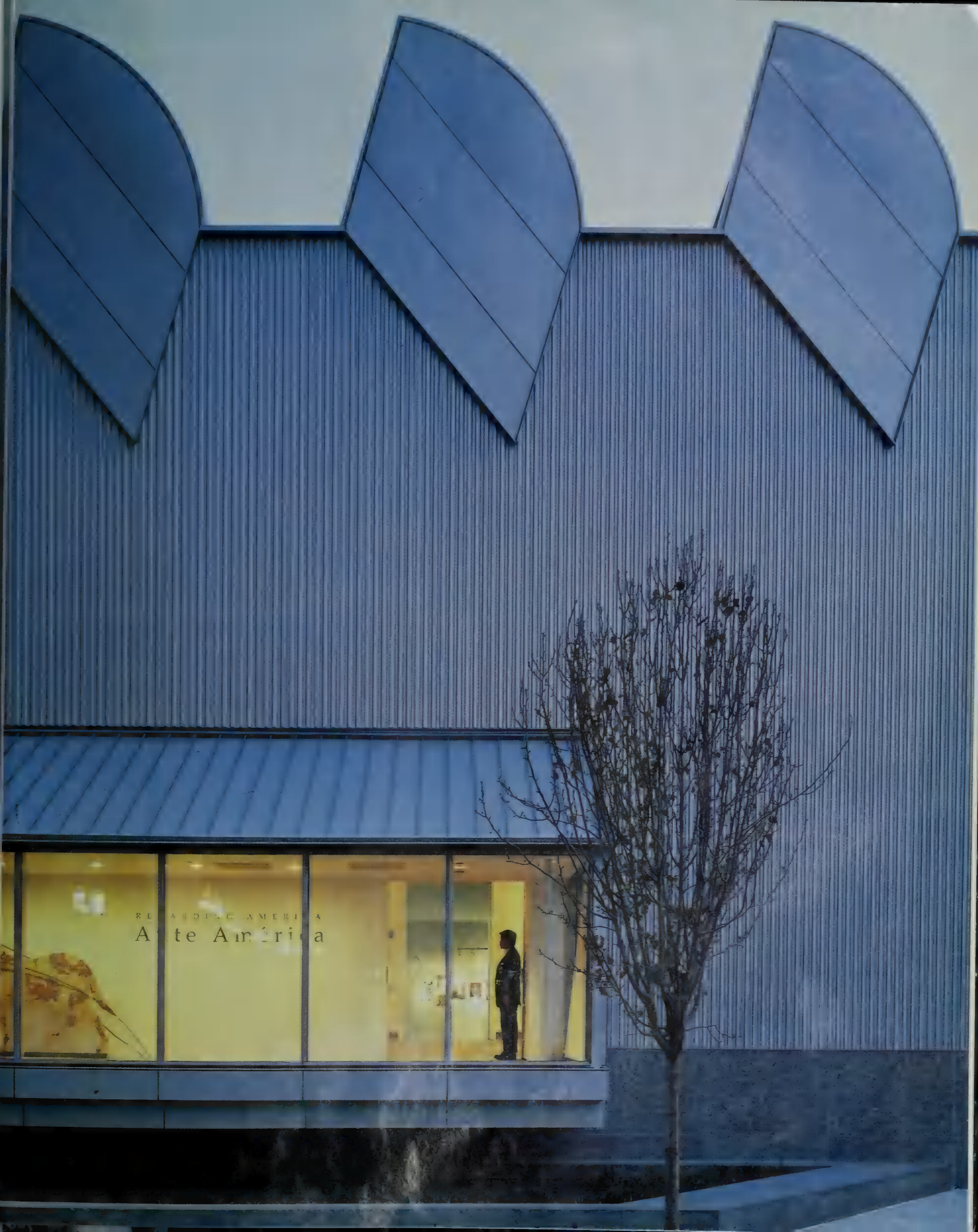
"I like Mies van der Rohe's museum in Berlin," says Maki. "While appreciating art, one is surrounded by the city." All of the primary spaces in the Galleries and Forum building were designed to link the inside and out, whether entrance foyer and second floor cafe (above top), large gallery with its adjustable louvers (above middle) or protruding passageway connecting the two first floor galleries. A snail-shaped metal rail (right) near the main entrance contrasts with the rectilinear aluminum panels.





1. *Metal studs*
2. *Gypsum sheathing*
3. *Extruded aluminum*
4. *Ribbed metal panel*
5. *"D" pin*
6. *Extrusion*
7. *Cornerstone*

AXONOMETRIC OF RIBBED METAL PANEL SYSTEM


RE ARDING AMERI A
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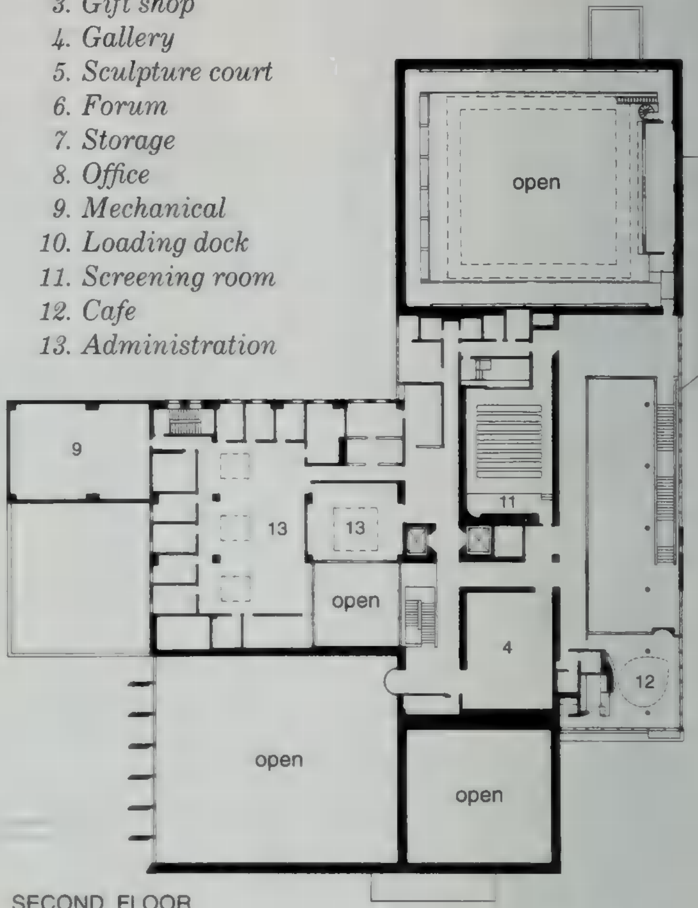
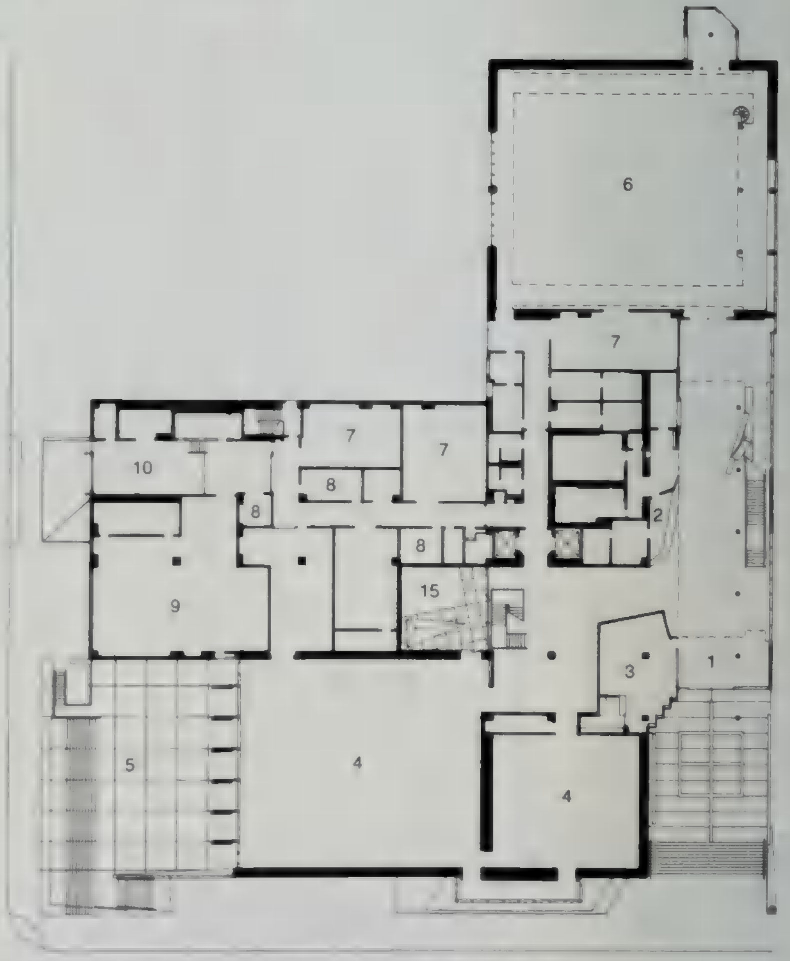
The L-shaped Galleries and Forum is organized so that the primary components of the program are oriented toward the Esplanade and Mission Street (plans) and connected by a glazed two-story lobby (above top). Designed for flexibility, the forum (opposite top) is crowned by a tensile grid made of steel net that accommodates all manner of lighting. A projection booth facilitates audio-visual presentations (above bottom). In the medium gallery, the ceiling soars to 25 feet. (opposite bottom).

Credits
Center for the Arts Yerba Buena Gardens Galleries and Forum, San Francisco, California
Owner: *San Francisco Redvelopment Agency*
Design Architect: *Fumihiko Maki + Maki and Associates—Fumihiko Maki, principal; Gary Kamemoto, project architect, Jun Aoki, former project architect; Steve Dayton, Lawrence Mattot*
Architect of Record: *Robinson Mills + Williams—Harish Shah, principal; Alan Kawasaki, project architect; Andrew Potter, Russ Nichols, James Aguila, technical managers; Ray Silverstein, Harshila Amin, Sam Hanna, Marcella Rodriguez, technical support, Felice Rosario*
Consultants: *Structural Design Engineers (structural); SJ Engineers (mechanical); FW Associates (electrical); S. Leonard Auerbach & Associates (theater/lighting); Laura Hogan Design (graphics); Hanscomb Associates (cost estimating); Kazuko Fujie Atelier (bench)*
Construction Manager: *Turner Construction Company*
Contractor: *Sumitomo Construction America, Inc.*

1. *Entrance*
2. *Reception*
3. *Gift shop*
4. *Gallery*
5. *Sculpture court*
6. *Forum*
7. *Storage*
8. *Office*
9. *Mechanical*
10. *Loading dock*
11. *Screening room*
12. *Cafe*
13. *Administration*

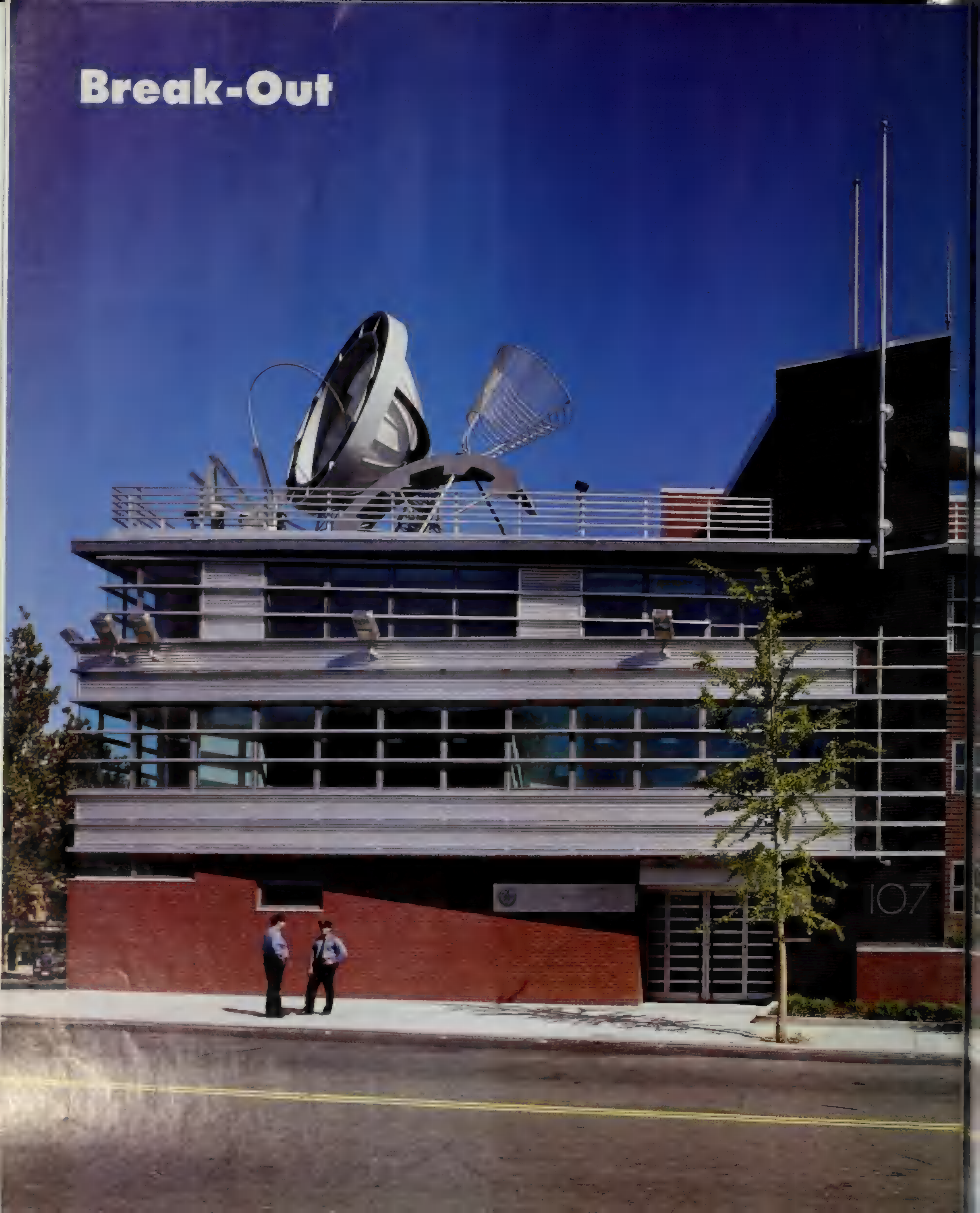


SECOND FLOOR



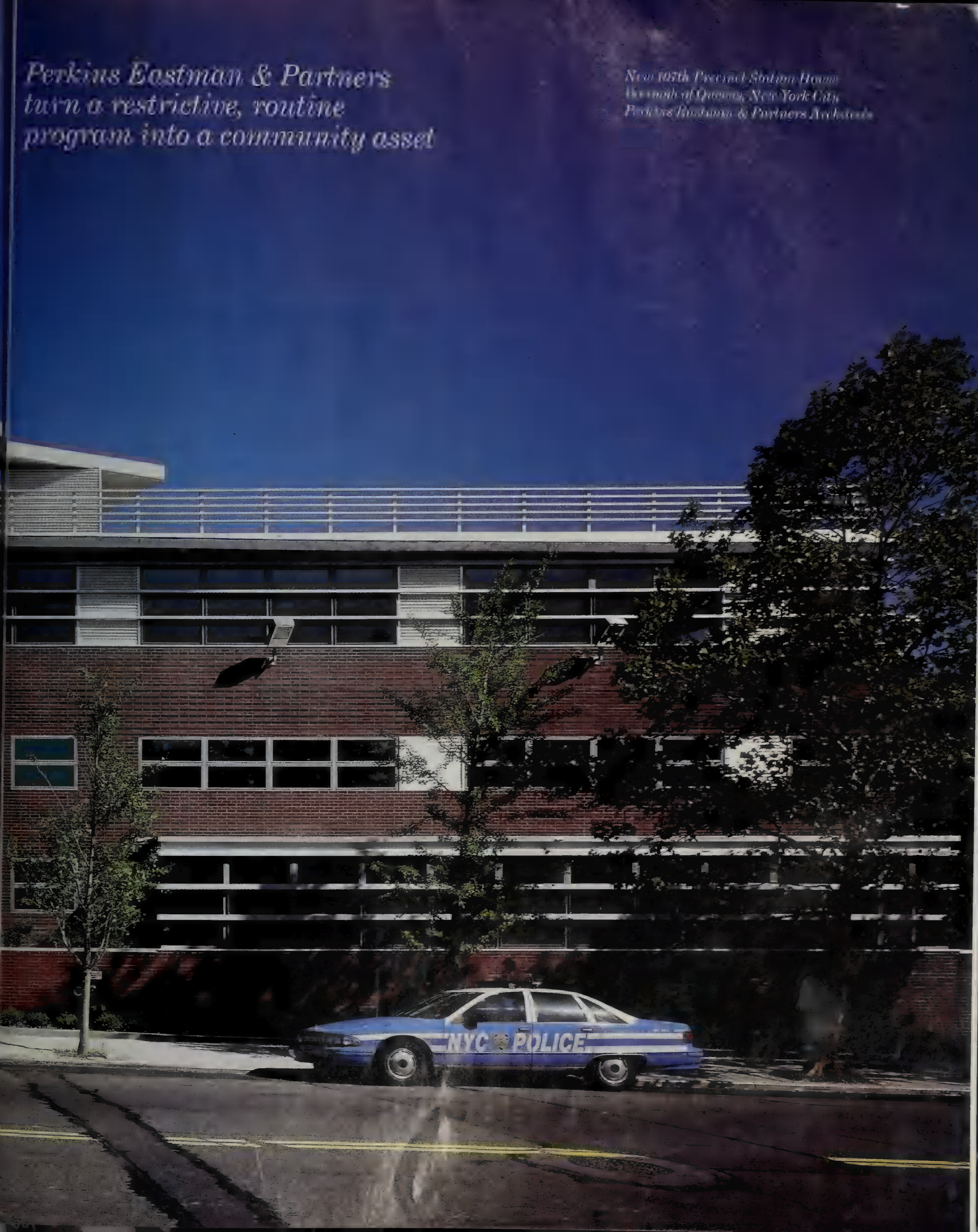
GROUND FLOOR N↙

Break-Out



Perkins Eastman & Partners turn a restrictive, routine program into a community asset

New 107th Precinct Station House
Borough of Queens, New York City
Perkins Eastman & Partners Architects



Police stations used to be civic monuments, recalls Perkins Eastman & Partners' Bradford Perkins. Designing them today, he says, means taking amorphous programs, which might as well be housed in box-like structures, and creating a building that's a positive influence on neighborhoods and users. It means breaking out of the box.

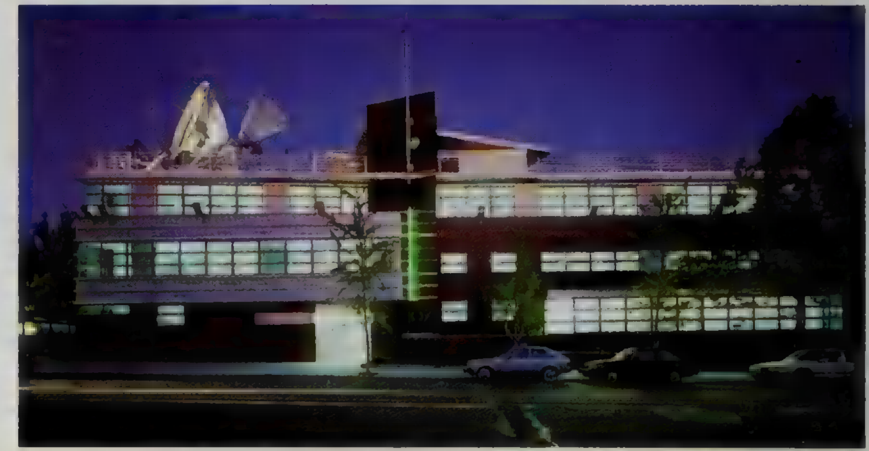
There are several suggestive givens in precinct-house design. Project designers Lucian Andrei and Alexander Vajda have exploited them to the maximum. First, explains principal-in-charge Mary-Jean Eastman, police stations need lots of parking—enough, in fact, for two whole shifts. (One cannot leave until the other arrives.) To accommodate so many cars, the designers pushed the new building tight up against the slightly skewed intersection of two main streets. The result is to put needed urban liveliness at a point where a strip shopping center meets rows of attached brick houses. Indeed, it is from these two contexts that the designers have taken their architectural expression, carried out in anodized aluminum panels and various patterns of iron-spot brick. "We looked around and used what was there," says Andrei.

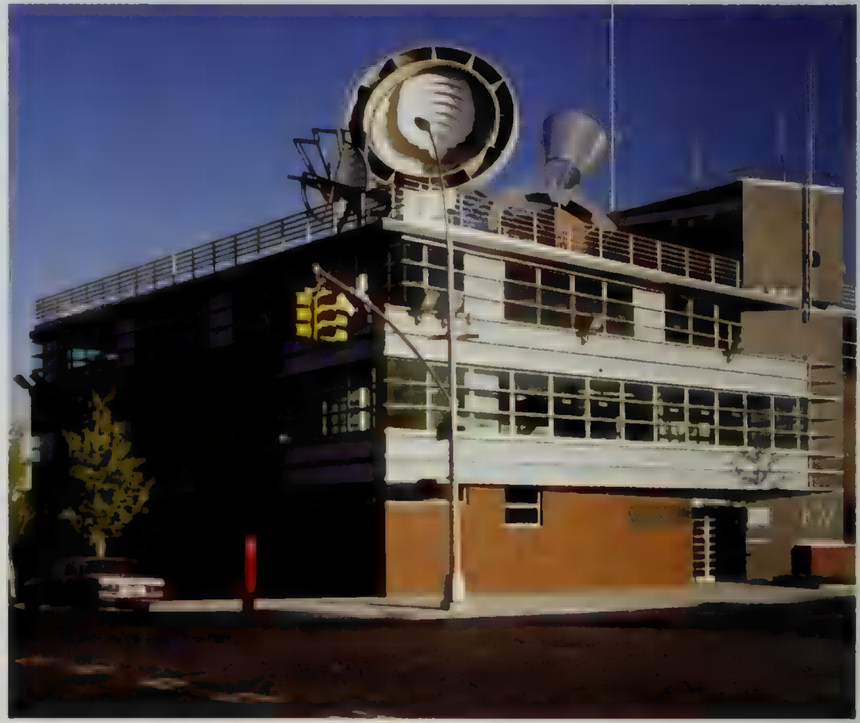
Inside, requirements are strict in detail but fluid in organization. For instance, isolated access to cell-block utilities is provided for security and to lessen repair people's risk of exposure to tuberculosis (see plan). One requirement common to all police stations is a briefing room, which the architects revealed to the outside as a large open space to the right of the main entrance (top photo, right). To indicate a sense of impregnability, the architects placed a wall in front of the windows. On the second floor, offices for inspectors and clerical staff, and dormitories all gave opportunities for varied fenestration. The third floor contains functions unique to this facility—a command center for the entire Borough of Queens. Here, above a ring of exterior lights that can be turned up to near-blinding intensity, commandants from all precincts will meet during crises to coordinate operations. Here, too, is an example of just how fluid police-station programs can be: A large space built as a conference room, complete with french doors and special cabinetry, now houses rows of desks for a newly created crime task force. Lockers took up almost half a floor. The architects placed them in the basement.

Because functions were so different on each floor, the architects opted for a flat-plate concrete structure so that they could locate columns flexibly. Normally, says Eastman, steel construction was less expensive "in that location at that time," but needed transfer beams meant greater expense. A happy side benefit was that floor-to-floor heights could be reduced to 10 feet 4 inches from the normal 12 feet 6 inches for an office building. This cuts 6 feet 6 inches off the walk between basement and third floor. It also means that ceilings are as high as the undersides of slabs in areas where there is no need to conceal utilities. The architects used this feature to full effect around the building's perimeter, where high windows flood the interior with daylight. Indeed, the station has many unusual details inside and out.

This station house is successful in part because the architects kept a full-time representative on site during construction, despite the lack of reimbursement in city contracts. "It's the only way to get what you design," says Perkins. Also, there was a slow, competitive construction market. This meant that the building was finished for $9 million—special details and all—well under the budget. A required Art Commission approval sometimes has held many city projects up for long periods. Tired of Postmodern schemes, the commission headed by architect James Freed passed this design in 30 minutes.
Charles K. Hoyt

© Chuck Choi photos.

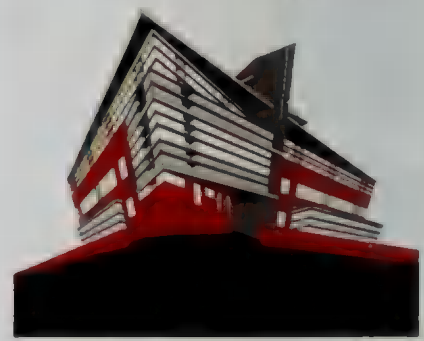


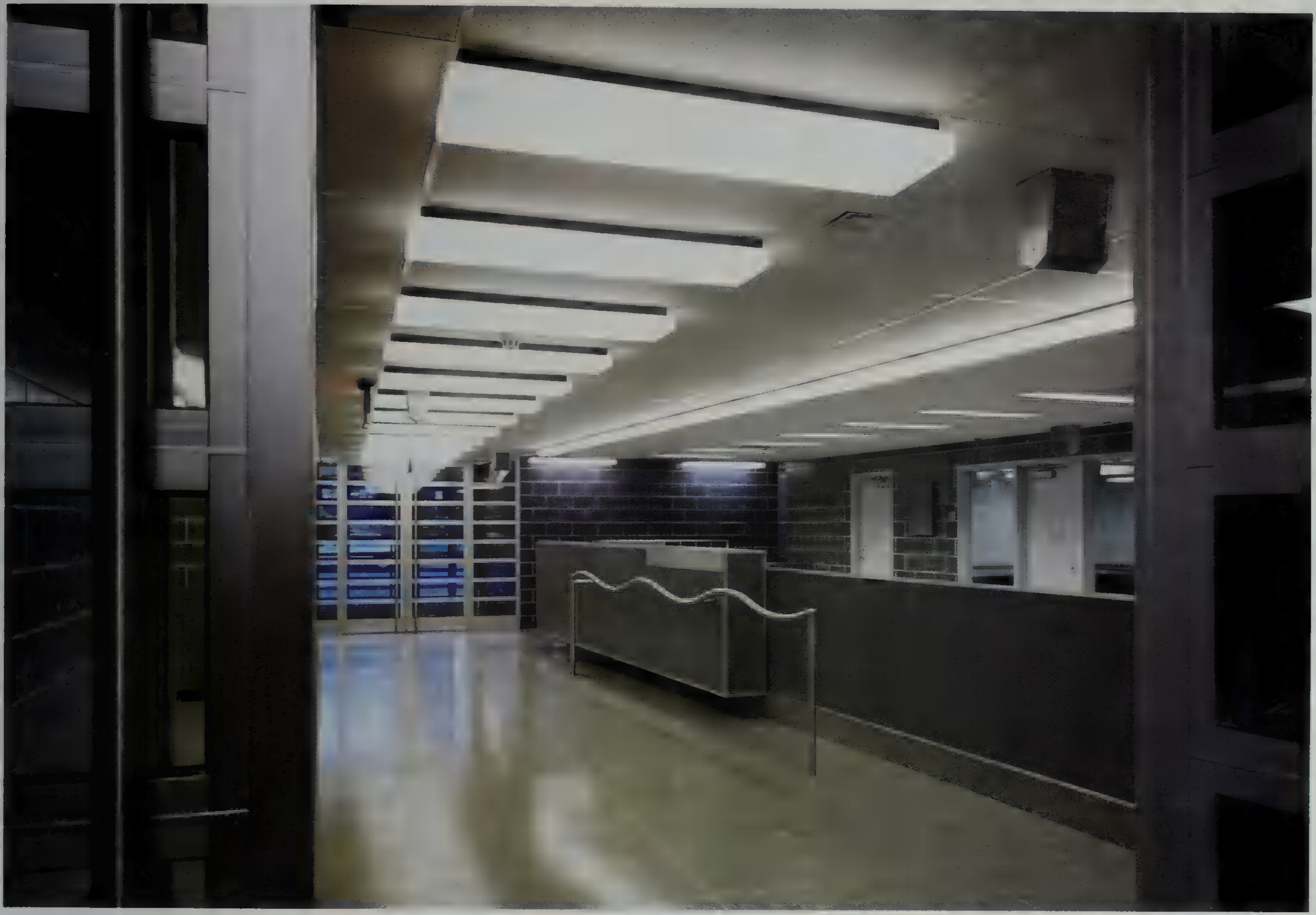


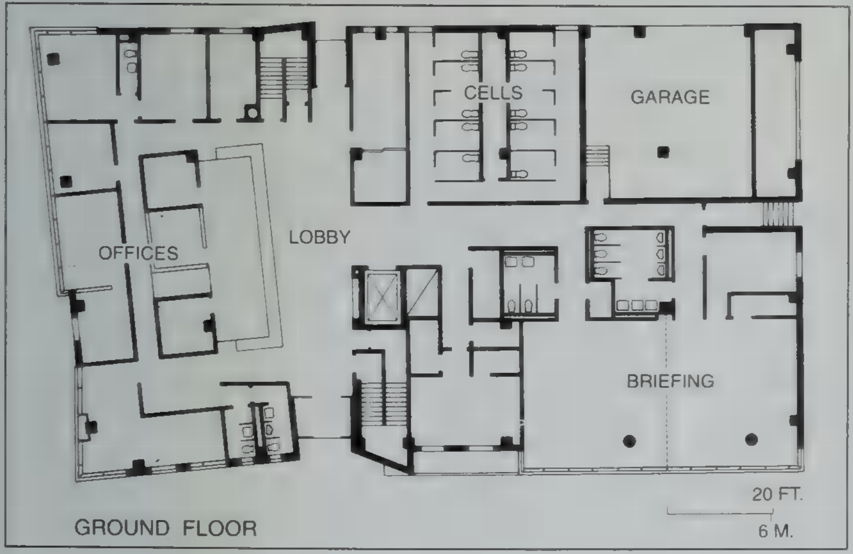
Stainless-steel trim on plastic-laminate-covered casework adds durability and refinement. Everyone entering and leaving the building must pass the duty officer's desk (opposite photo), so that first-floor public space must be a fire-rated exit for stairs from above and below.

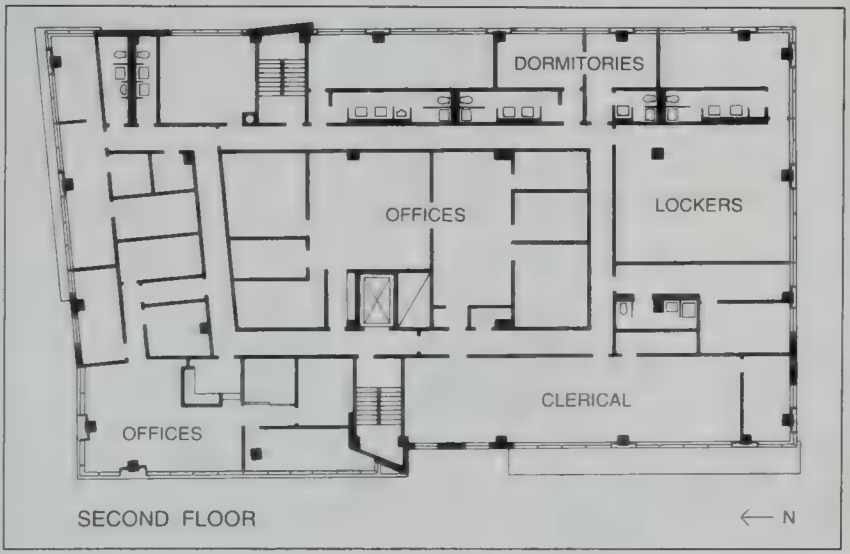
Walls are glazed structural block. The undulating "equal-opportunity" booking rail only passed client scrutiny when the architects explained that prisoners come in all heights. Cabinetry elsewhere takes on sculptural forms. The rooftop satellite dish is the result of the city's one-percent-for-art policy. The architects describe it as a happy collaboration. Some neighbors, taking it for real, complain about TV reception. "It's about communications," says sculptor Alice Aycock.

Designers' original concept.



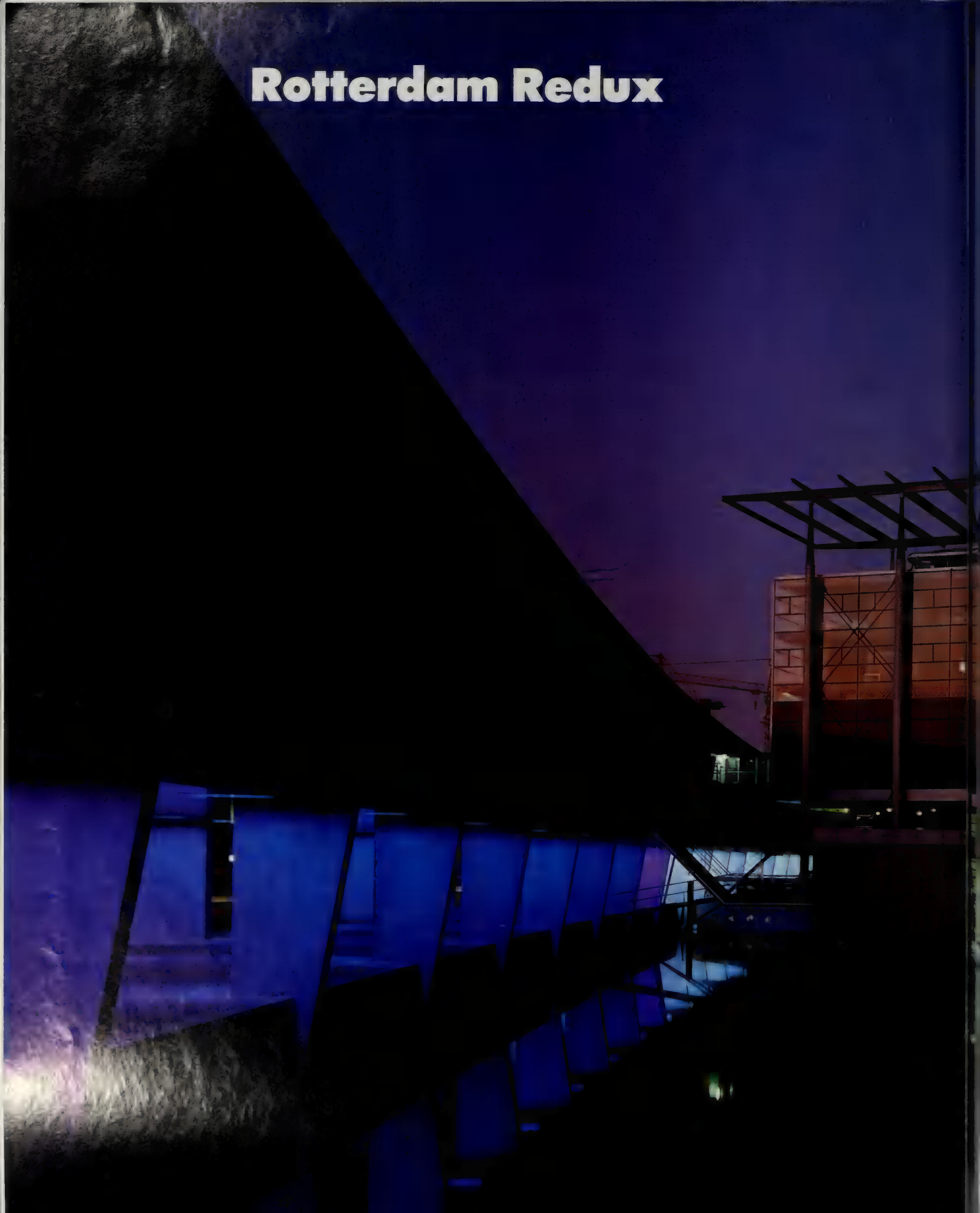






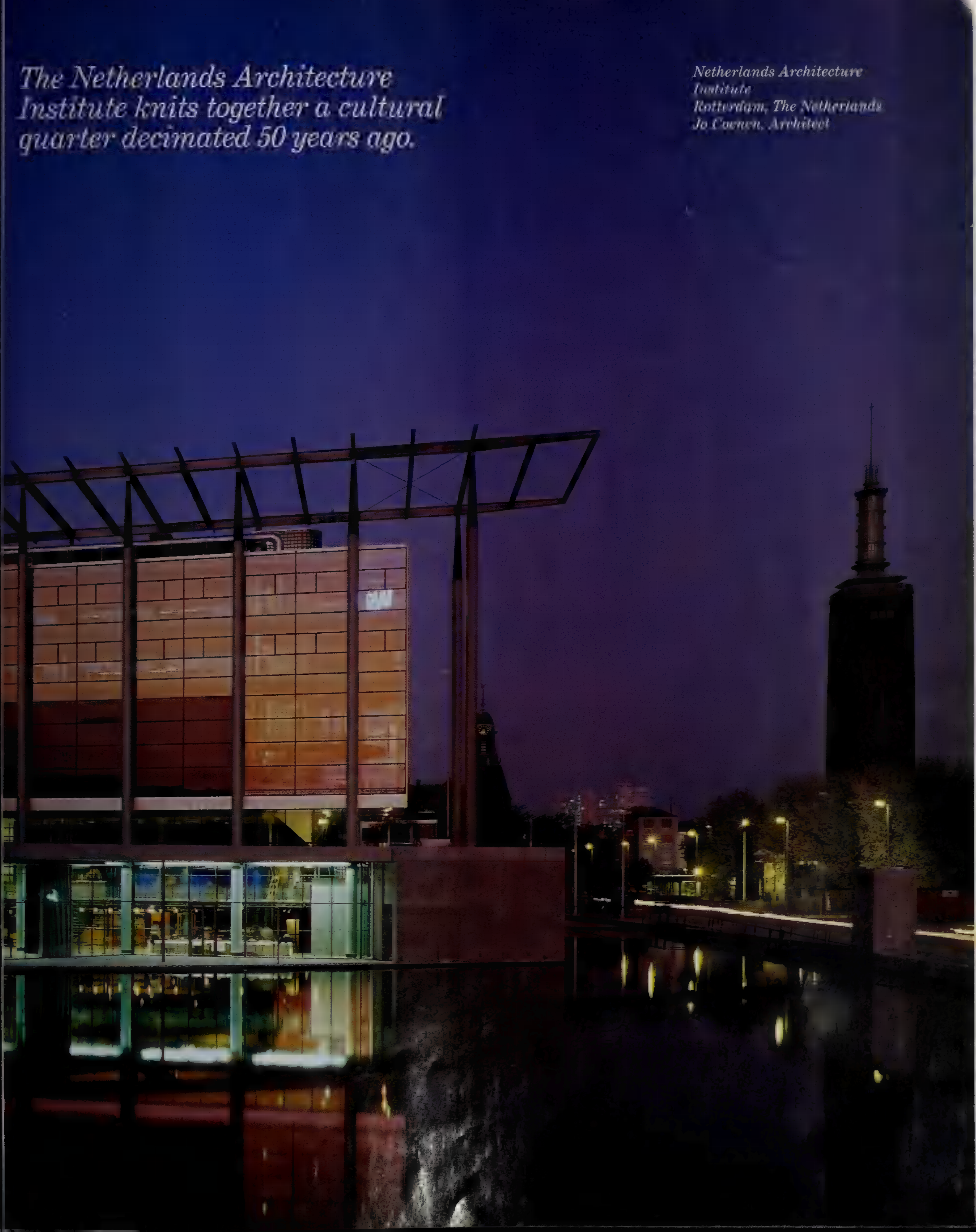
Credits
New 107th Precinct Station House Borough of Queens, New York City
Owner: *New York City*
Developer: *New York City Department of General Services*
Architect: *Perkins Eastman & Partners—Mary-Jean Eastman, partner-in-charge; Bradford Perkins, resource principal; Lucian Andrei and Alexander Vajda, project designers; Cono DiZeo, project architect; Paolo Bertolotti, Mike Ciemny, Herbert Dixon, Anthony Hatziioannou, Peter Hughes, Maurico Salazar, project team*
Roof Sculpture: *Alice Aycock*
Engineers: *Severud Associates (structural); Kallen & Lemelson (M.E.P.)*
Landscape Architect: *Coe Lee Robinson Roesch*
Cost Estimator: *Amis, Inc.*
Construction Manager: *York/Hunter City Services, Inc.*
Contractors: *Morris Park Contracting Company, Inc. (general); Northgate Electric (electrical); L. G. Plumbing, Inc. (plumbing); Thermo Dynamics, Inc. (hvac)*

Rotterdam Redux



The Netherlands Architecture Institute knits together a cultural quarter decimated 50 years ago.

Netherlands Architecture Institute
Rotterdam, The Netherlands
Jo Coenen, Architect



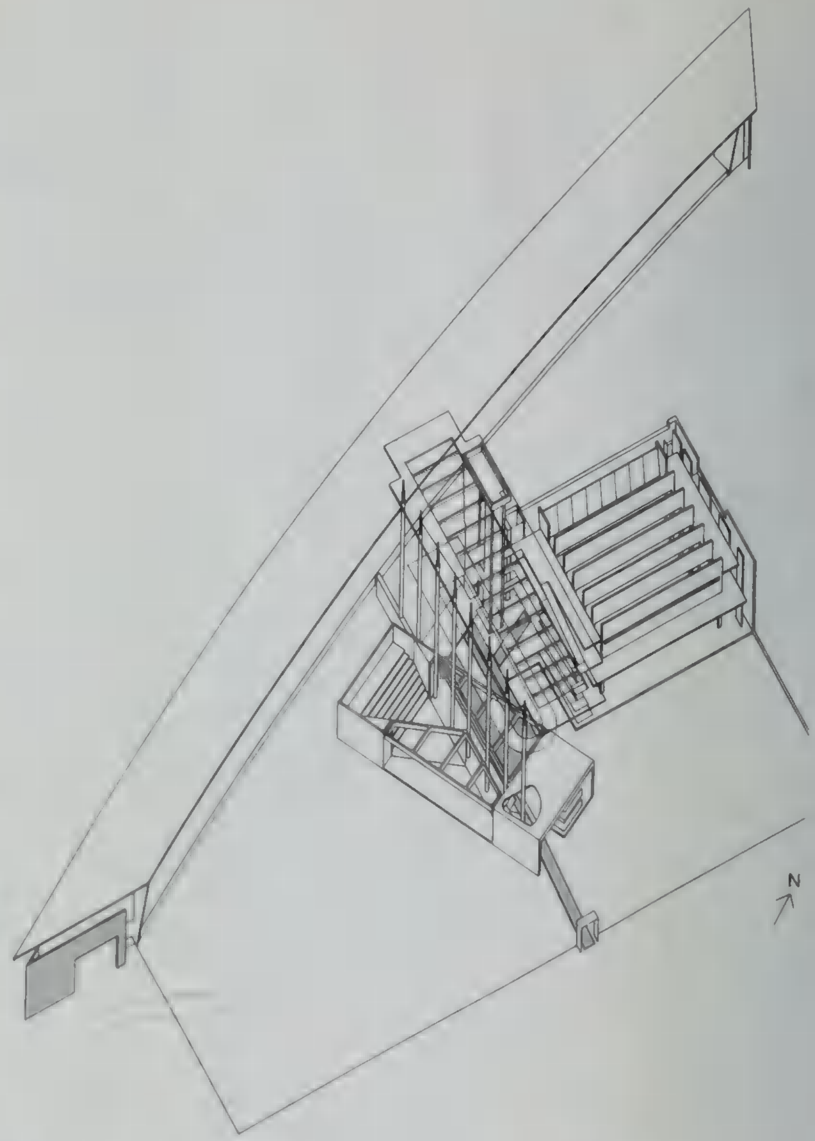
The new Netherlands Architecture Institute in Rotterdam is not meant to be just a solemn museum, but an informal and lively gathering place for professionals and the public alike. To this purpose, architect Jo Coenen did not design a building so much as a grouping of separate but interlocking parts, each an expression of the institute's various functions. The long, curving treasury containing the archives (among them those of Berlage and Oud) shields the ballroom (the exhibition space) from the street; above them towers the glass study, containing the library and offices. Angled under the glass tower is a two-story reception pavilion.

In 1988, more than 100 years of debate ended with a competition for the federally-funded complex. Coenen was chosen over the other five participants, among them fellow Dutchman Rem Koolhaas, and the Tessin Swiss Snozzi (one of Coenen's own mentors and the only foreign participant). Coenen champions a strongly contextual approach and a style in which Modernism is tempered by craftsmanship and tradition. "Architecture can easily be festive without becoming superficial," he says. "But the Dutch are inclined to dismiss it as empty rhetoric." Indeed, he is not averse to heightening the drama of this ensemble by the time-trusted technique of placing it in a pool of water.

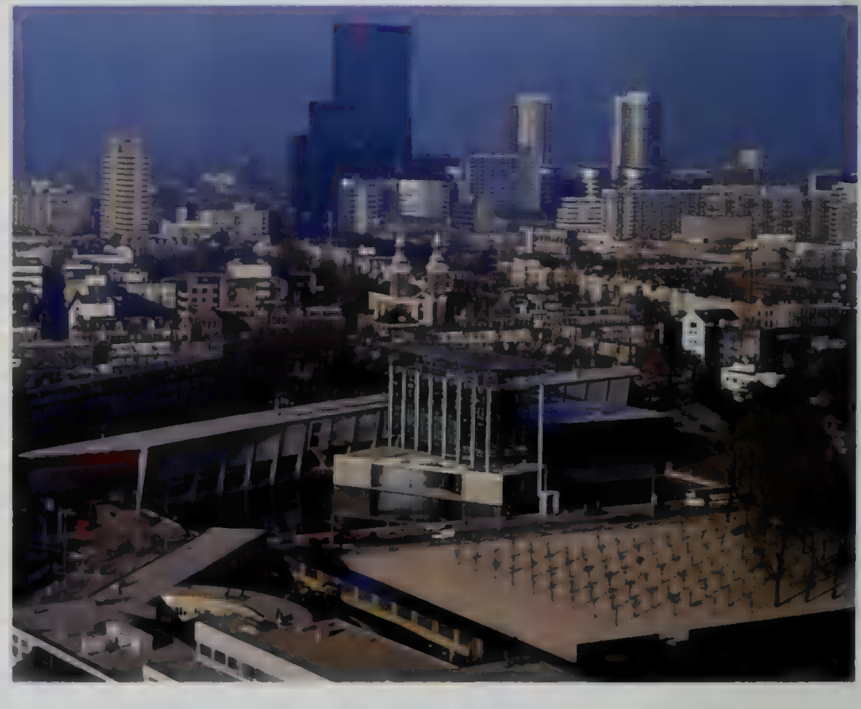
The choice of materials underscores the institute's composite nature. In the glass study, the library is protected from excess daylight by enameled-glass panels, and topped by the robust steel pergola of the same height as the copper tower on the neighboring 1935 museum. The cube-like exhibition space is brick-clad, a nod in the same direction. The treasury is faced with dark-red corrugated metal panels (a compromise; Coenen would have preferred wood or copper). The exhibition hall, containing one large ground-floor space and three auxiliary galleries on the third and fourth levels, is entered by narrow ramps of rough blue- and yellow-washed concrete.

The walls of the reception pavilion are one of the building's technical innovations: structural double-glazing, an experiment by the Dutch firm, Octatube, with a subsidy from the Ministry of Affairs. The panels are joined by so-called "quattro-knots" and the double-height walls stiffened by cables. Under the treasury runs a concrete arcade which was originally designed open at both ends. As executed, however, the arcade has become a double dead-end, housing the offices of the institute's magazine, *Archis*, at one end, and a café at the other, making it more of a gallery than an urban passageway. A computerized show of colored lights by Peter Struysken is slotted into the arcade's pylons. The treasury and its arcade separate the busy Rochussenstraat with its stream of traffic on the one side from the tranquility of the building's pool and the Museumpark on the other. Coenen has taken the urban situation into account in other ways as well: one can walk from the Museumpark straight through the architecture institute. The entrance from the park is not quite convincing, however. The gangway across the pool is well-proportioned, but compared to the flamboyant whole, it is too scaled down.

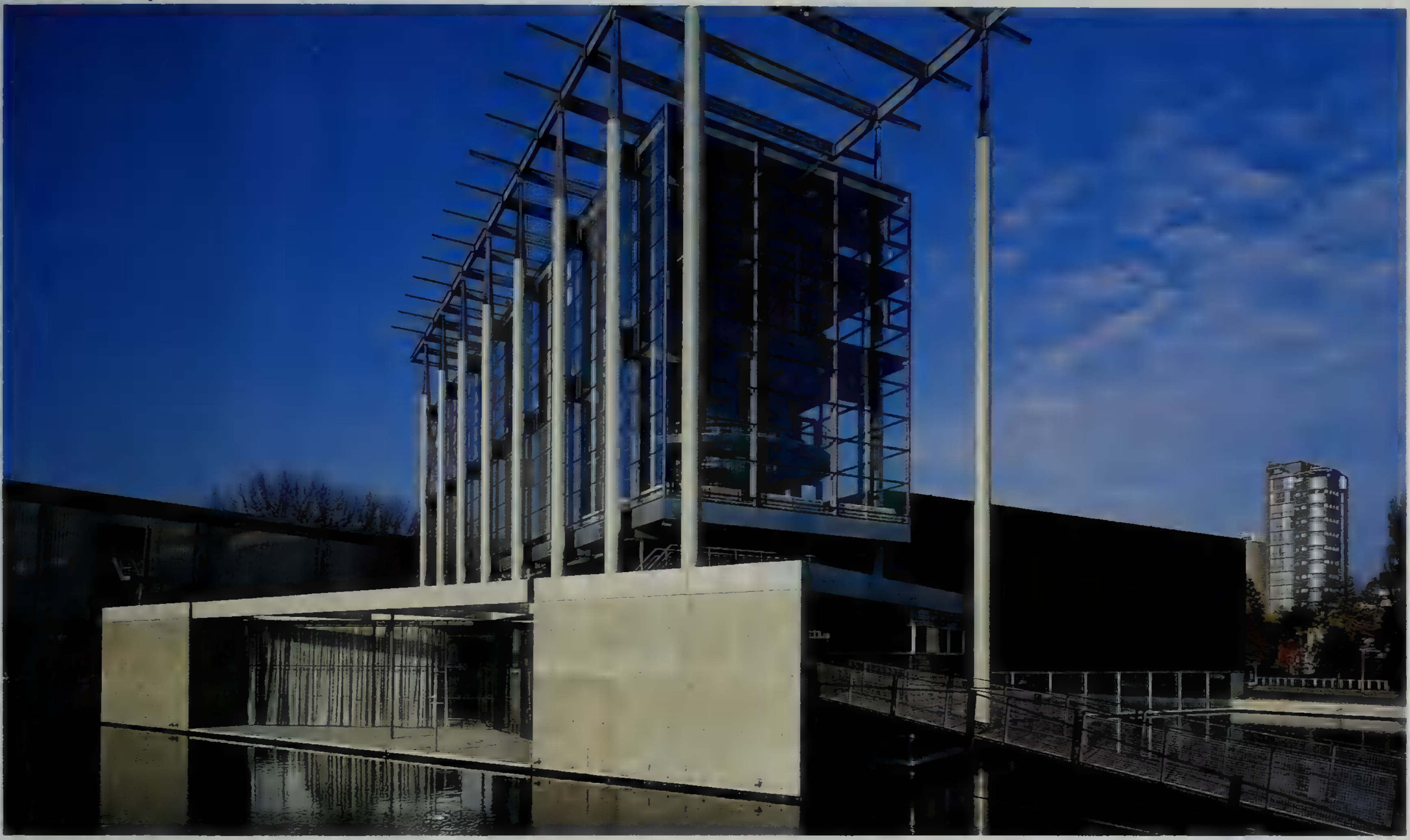
The institute marks the near-completion of a new cultural quarter in downtown Rotterdam, with the Museumpark, designed by Koolhaas and the late landscaper Yves Brunier, at its heart. Surrounding the park are the museum Boymans-van Beuningen (1935), a new private museum for the local painter Bert Chabot in a 1930s white villa, a natural history museum, and Koolhaas' own KunstHal [RECORD, March 1993, pages 66-73]. Slowly but surely Rotterdam is stitching back together the urban fabric torn apart by the German Blitzkrieg at the beginning of World War II. *Tracy Metz*

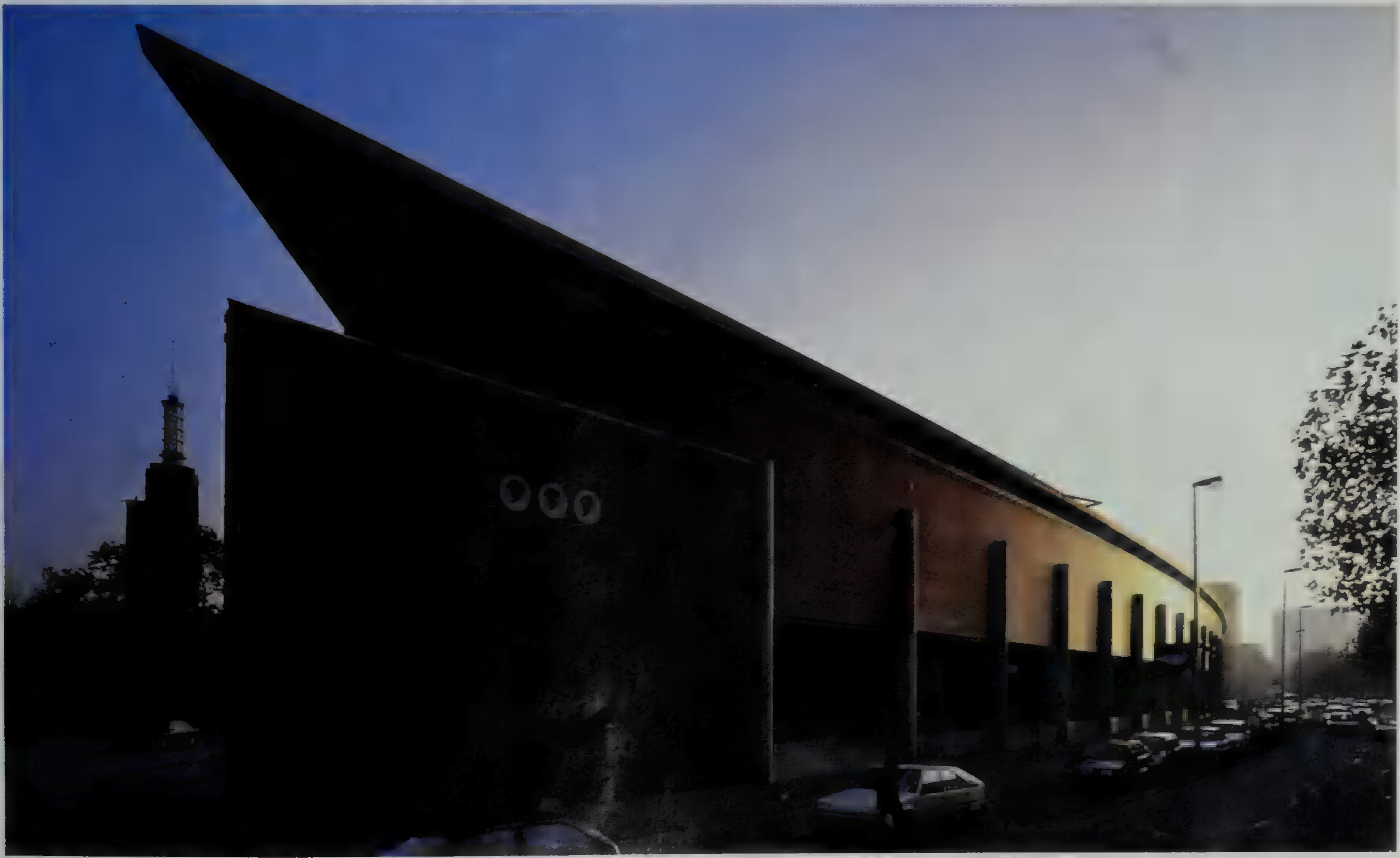


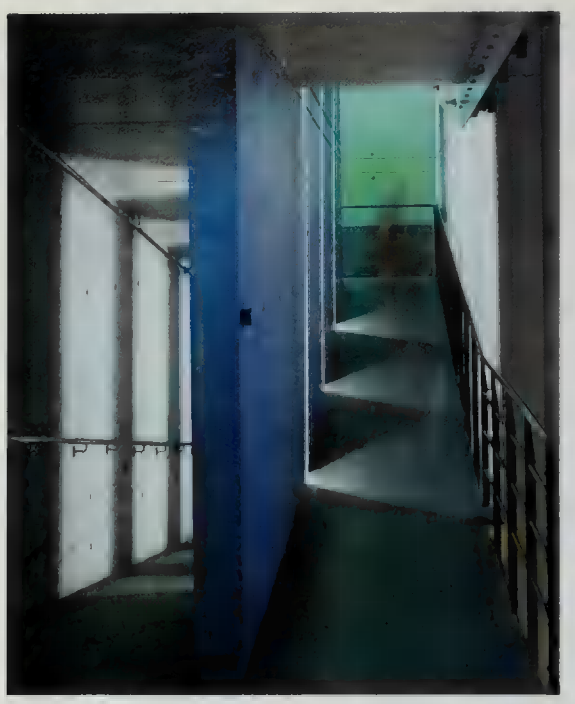
The Netherlands Architecture Institute's archives building (above) cradles the reception pavilion, glass library/office tower, and brick exhibition hall. Downtown Rotterdam (below) looking north, shows the institute and Museumpark in the foreground. The gangway (opposite top) connects the Museumpark with the congestion of downtown Rotterdam. The curving, brick archives building is opposite bottom.



Jannes Linders photos

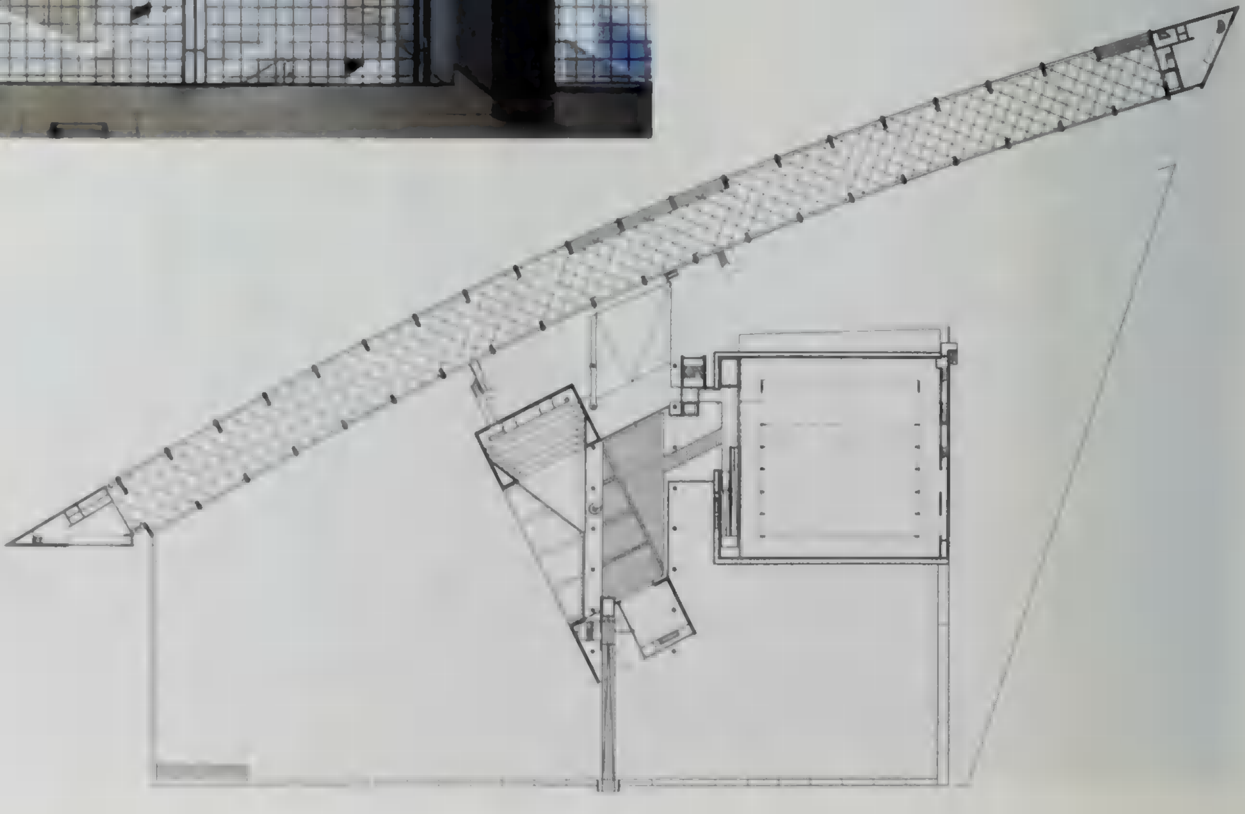


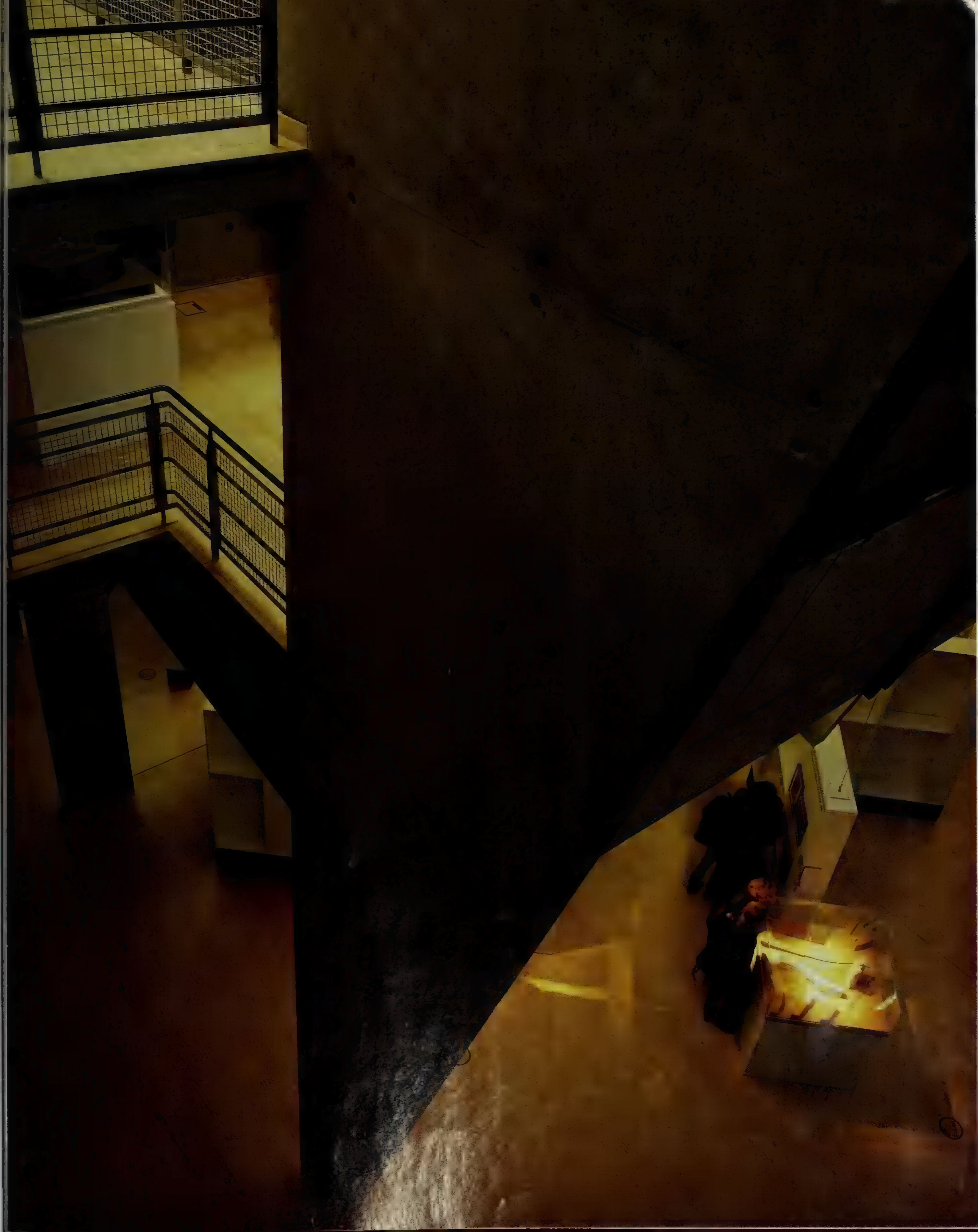




Yellow- and blue-washed ramps allow access to the four-level exhibition hall (top left); the glass-block walls and voids in the archives building (top right) are another unabashedly Modernist reference. The third level of the exhibition hall reveals the open metal-grid floors of the fourth-level gallery (bottom photo). Plan, bottom, is the footprint of the main floor with skyways connecting the reception area to the archives and the exhibition hall. Opposite, a view down a non-load-bearing concrete pylon into the exhibition hall.

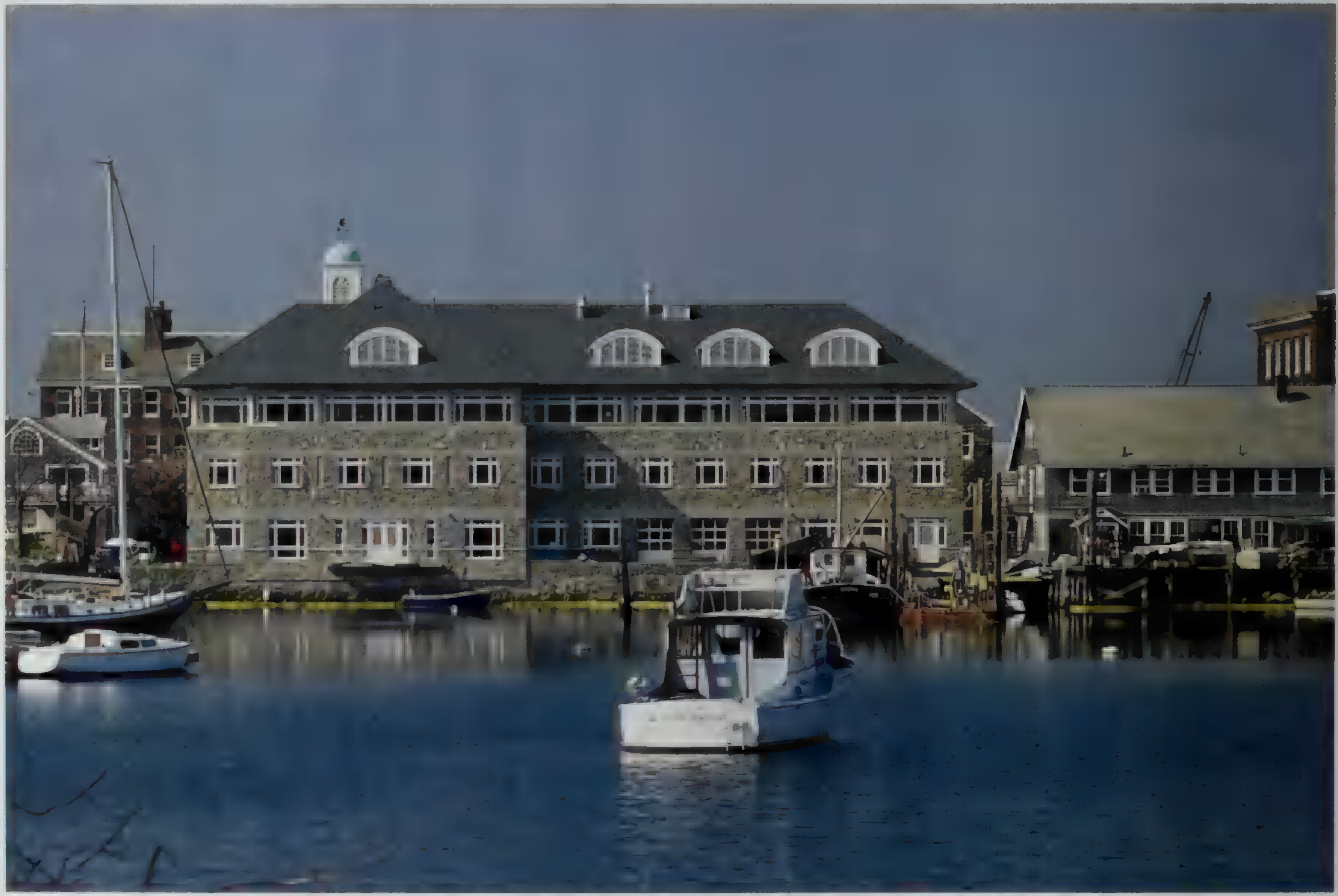
Credits
Netherlands Architecture Institute
Rotterdam, The Netherlands
Architect: *prof. J. M. J. Coenen*
Consultants: *G. A. van Dijk en Zn (grounds and pool); Projektservice Dynatherm Zuid (installations); Advies-en Ingenieursburo Van der Laar (construction); Adviesbureau Peutz & Associes (acoustics)*
Contractor: *Strukton Bouwprojekten*





Laboratories in Low-Tech Contexts

© Steve Rosenthal



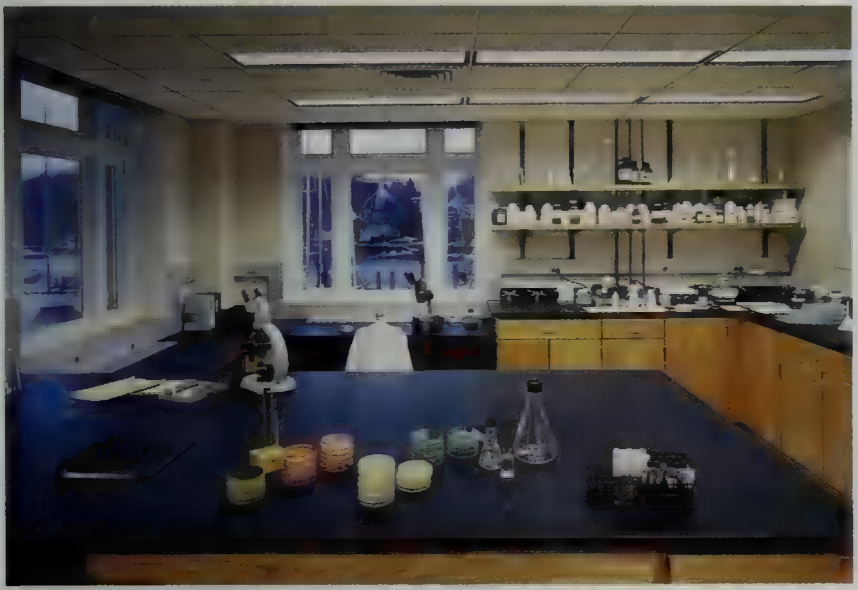
Marine Resources Center

Marine Biological Laboratory
Woods Hole, Massachusetts
Tsoi/Kobus & Associates, Inc.

The Marine Resources Laboratory is located at water's edge of Eel Pond, a safe harbor at the historic fishing village of Woods Hole, not a locale where a new building would necessarily be welcome. Architect Edward Tsoi worked with a committee of the most vocal opponents of the building to help shape the lab's character, drawing on an abutting whaling structure made of granite (above), and shingle-style and fenestration elements from other local structures. The purpose of the lab is to provide high-quality marine specimens for research purposes. Crab, shark, squid, and some 200 other species can be sustained by the facility's sophisticated recirculating seawater system (upper right), and tanks and mechanical support occupies a good deal of the building's area, as do laboratories (lower right), conference

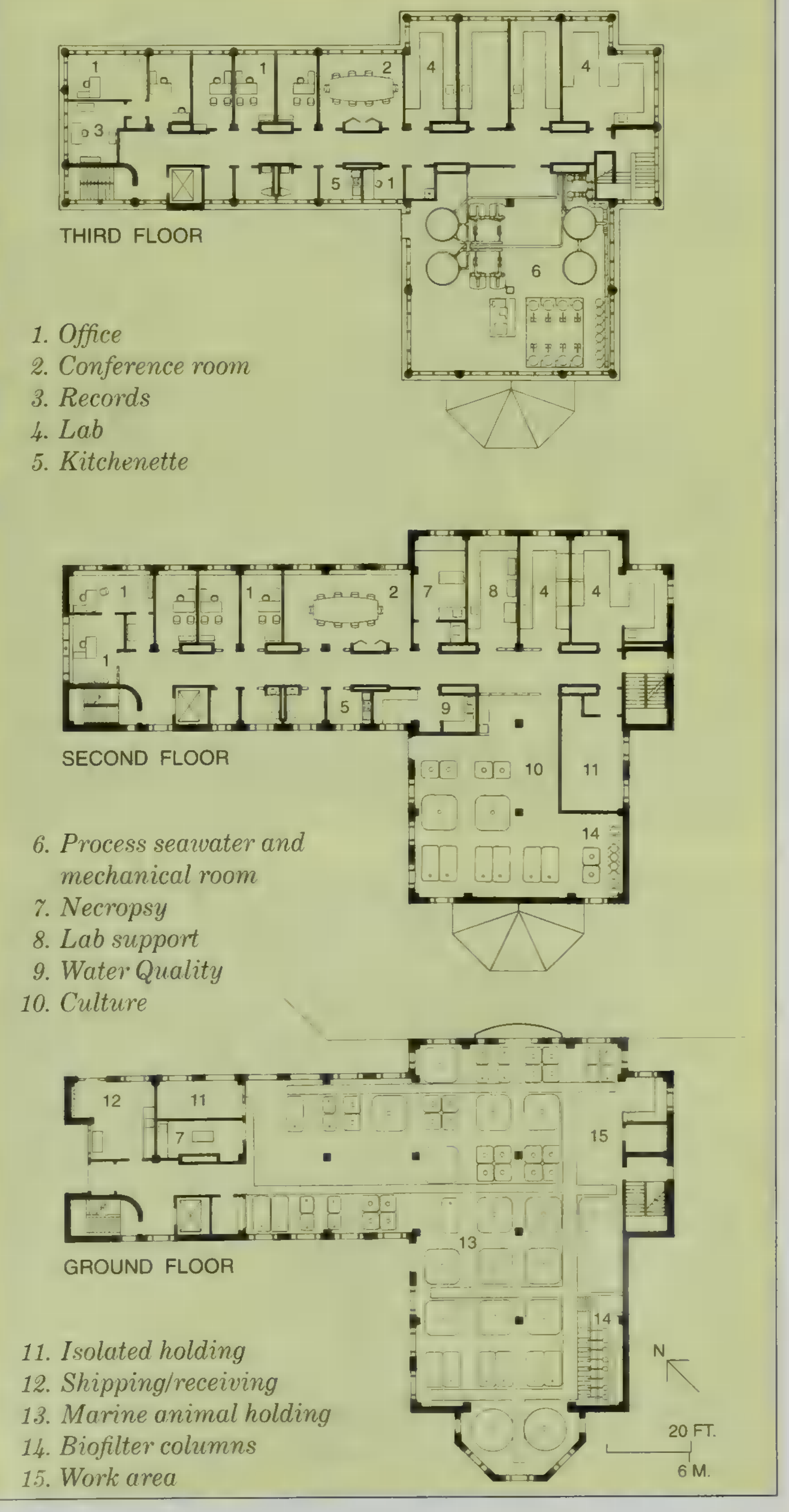
The sleek, high-tech expressionism currently in vogue for lab buildings isn't appropriate for every context. Here are three laboratory buildings that strive for a low-key, low profile image.

Charles D. Linn



rooms, and offices. Despite early opposition, the laboratory has become a popular destination. Why? The architects located some of the largest tanks inside the building's big bay window. There, passersby can enjoy an occasional glimpse of a shark's snout breaking the water. "It's a great opportunity to share science in the raw," says Tsoi, "without intruding on this delicate environment."

Credits
Marine Resources Center
Woods Hole, Massachusetts
Owner: *Marine Biological Laboratory*
Architect: *Tsoi/Kobus & Associates—Edward T. M. Tsoi, principal*
Consultants: *Bard, Rao+ Athanas/Sullivan Partnership (MEP); James Montgomery Consulting Engineers (life support)*



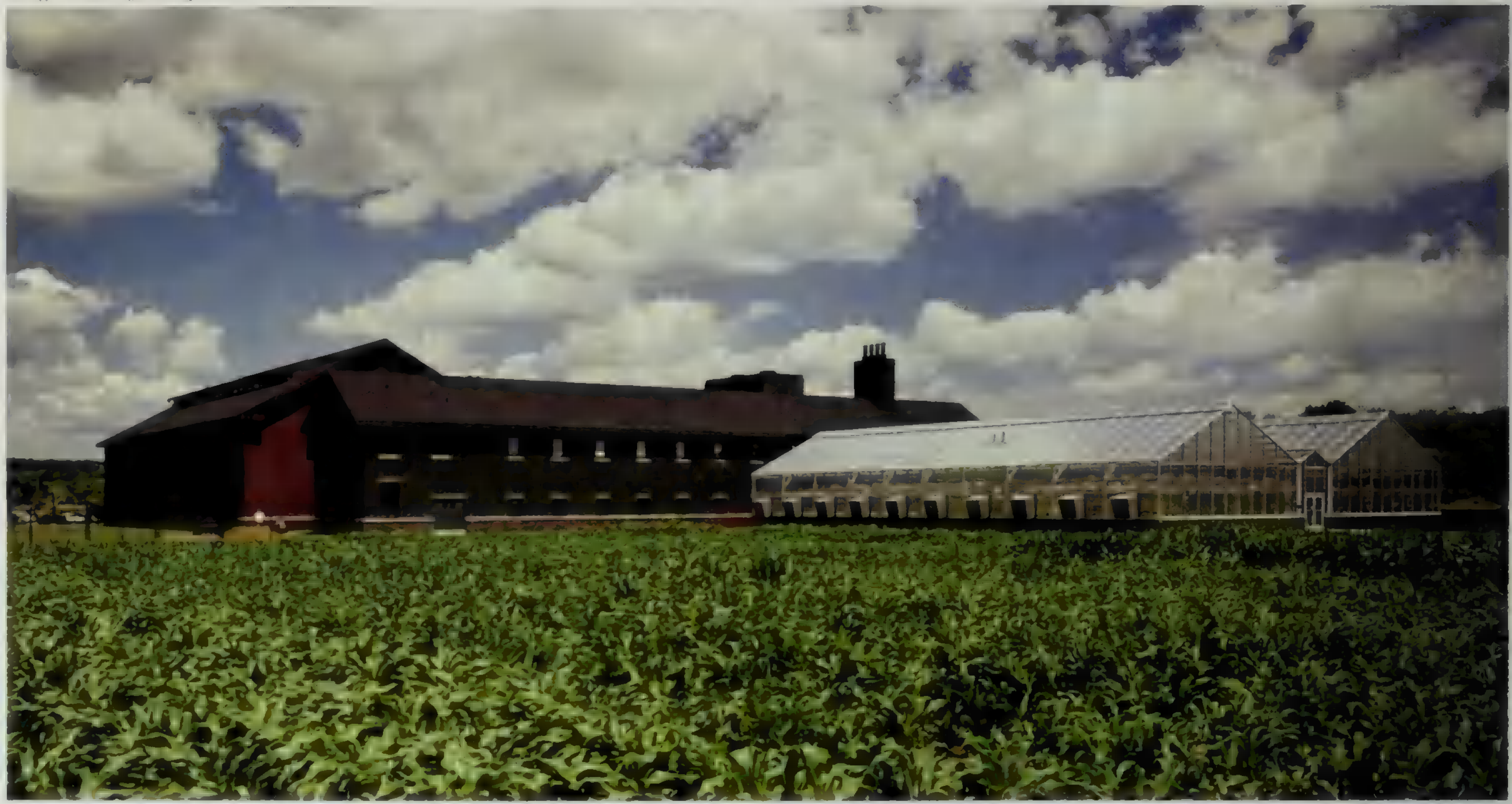
1. *Office*
2. *Conference room*
3. *Records*
4. *Lab*
5. *Kitchenette*
6. *Process seawater and mechanical room*
7. *Necropsy*
8. *Lab support*
9. *Water Quality*
10. *Culture*
11. *Isolated holding*
12. *Shipping/receiving*
13. *Marine animal holding*
14. *Biofilter columns*
15. *Work area*

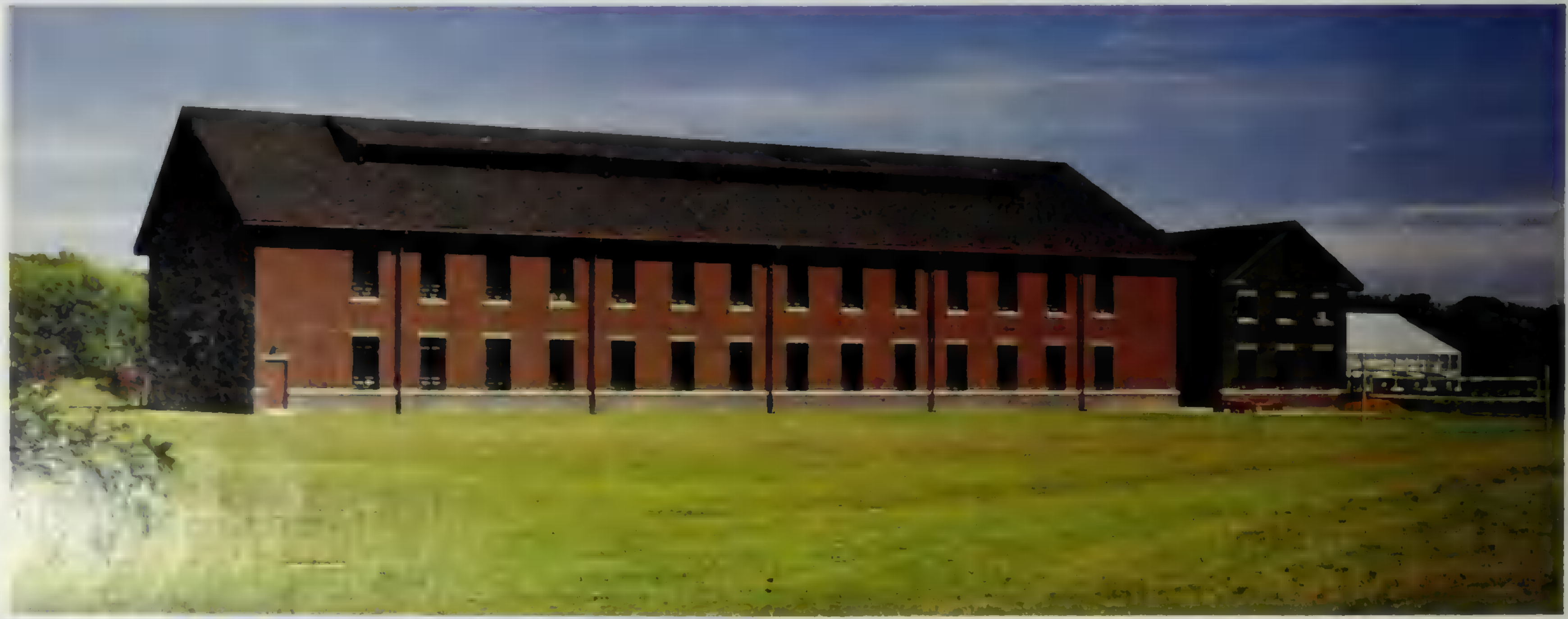
Discovery Research Center

Dekalb Plant Genetics Corporation
Stonington, Connecticut
Centerbrook Architects and Planners

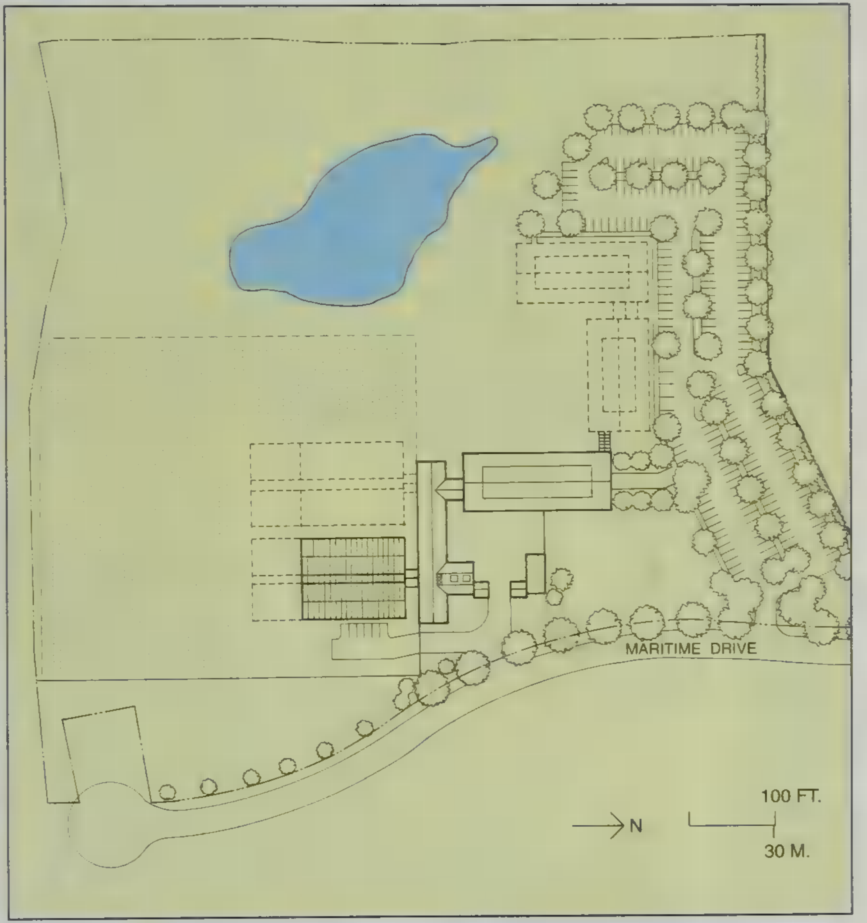
The Discovery Research Center is the site of research into methods for breeding varieties of drought- and insect-resistant corn. Centerbrook's designs for the building and its accompanying research greenhouse are surprisingly agricultural in appearance, taking on the proportions and gabled-roof structure typical of farm and other rural buildings. "The nearby communities are very conscious of what buildings look like," says architect William Grover. "We try to make buildings that fit into the neighborhood, so they don't stand out. We also spent a lot of time with the community describing what was going to go on in this building, communicating what environmental precautions were being taken. Centerbrook believes in public participation." The build-

©Jeff Goldberg/Esto photos





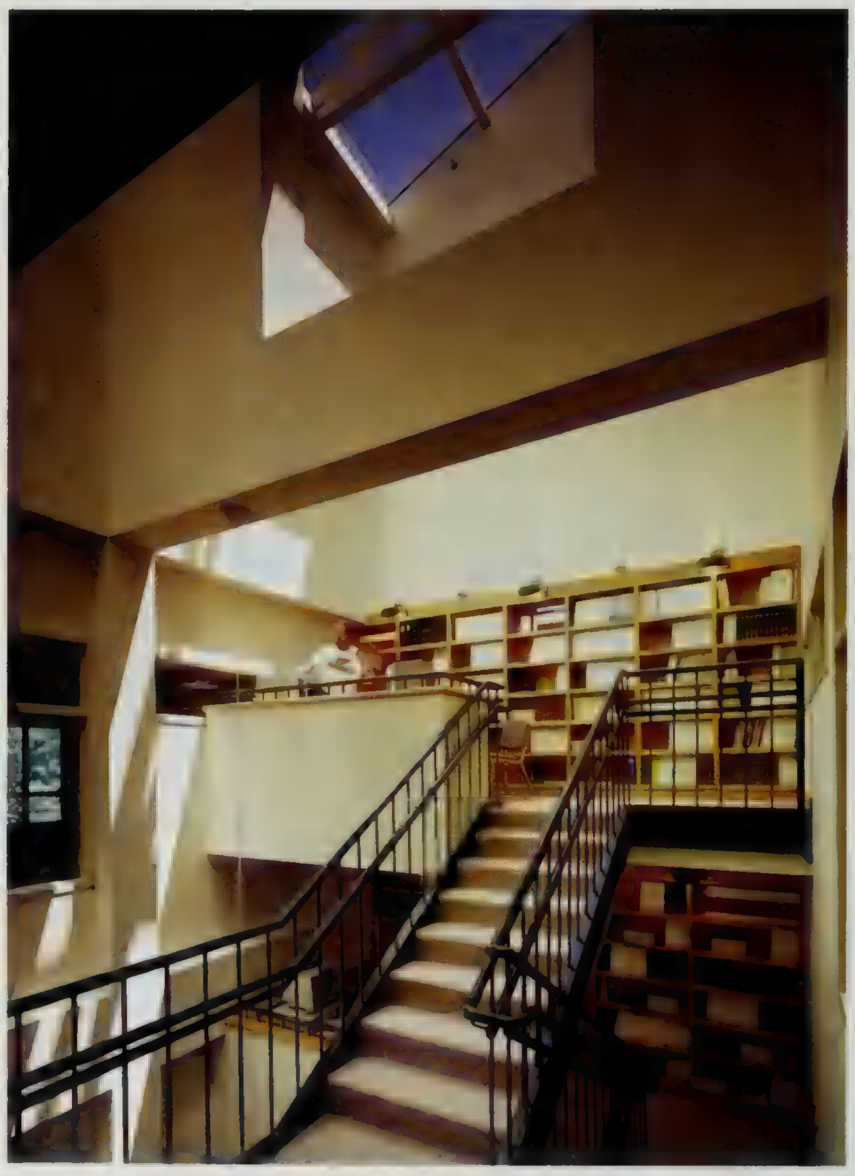
ing is broken down into three parts: labs, the headhouse, and the greenhouse. The first- and second-floor labs are organized around a "racetrack" corridor, with offices located on the west side of the building, cold and warm rooms, dark rooms and other lab-support rooms located in the center core, and labs located on the east. This gives the scientists access to windows wherever they are working. Offices and laboratories are separated, encouraging chance meetings between scientists. The lab's skylit library is located between labs and offices also to enhance interaction. The barn-like solution worked out well because laboratories demand a great deal of mechanical space, which has been installed in the gabled attic. The headhouse contains more mechanical equipment, and a service courtyard closed off by rolling gates conceals tractors, implements, and above-grade fuel tanks. The research greenhouse is constructed of a double-walled plastic skin, and is automatically ventilated by motorized ridge vents and fans when the temperature gets too high. Sections of the greenhouse are carefully sealed to prevent pollen from one test plot from contaminating another. The building also plays a role in recruiting scientists, according to Grover. "Scientists don't always like high-tech buildings," concludes Grover. "When you're working with them, they always ask for some wood or wood cabinets. They want a window that opens. They live all day in a high-tech atmosphere,

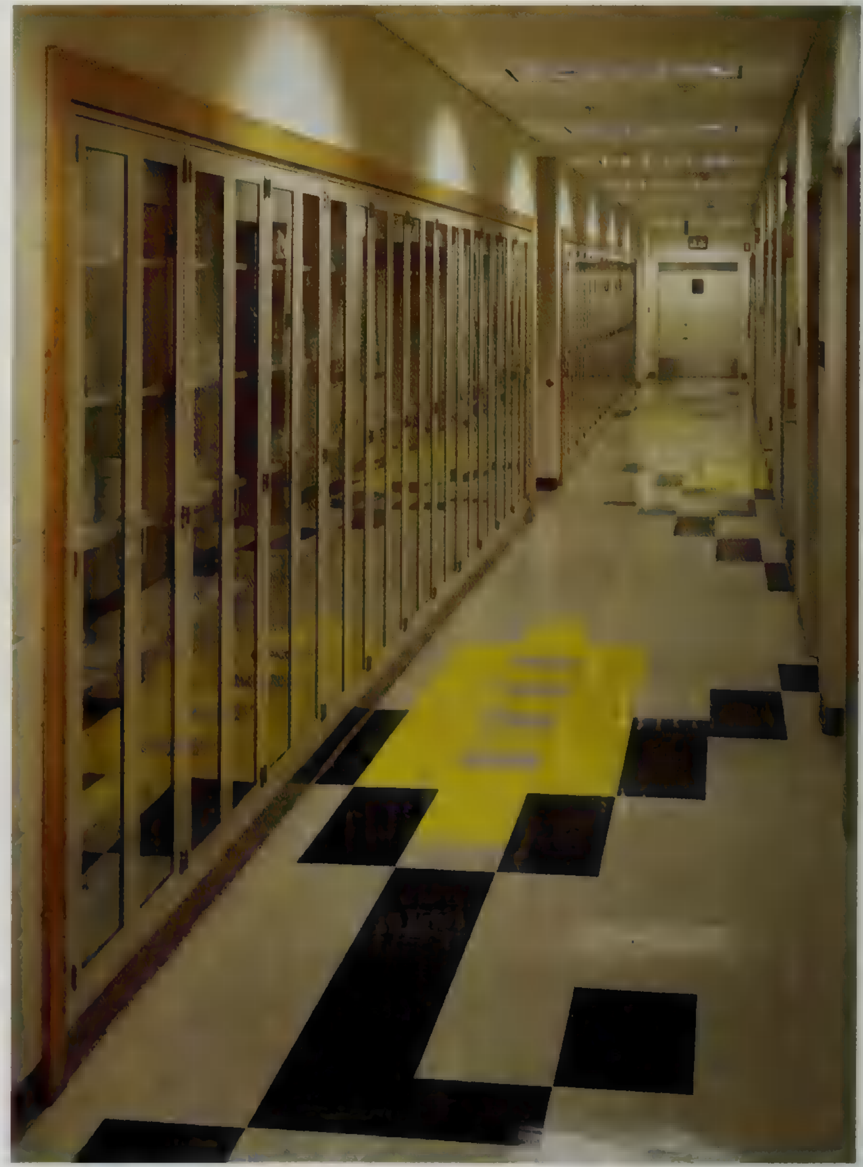


The picturesque structure of the Discovery Research Center is convincingly drawn from agricultural metaphors. It so cleverly conceals the usual stacks and ventilators, one might never suspect its high-tech purpose. The offices and laboratories are housed in the reddish section of the building (opposite below), while the green-colored headhouse contains mechanical equipment, lab support facilities, and room for future expansion. Tractors and implements are stored in the building and courtyards (left) and secured by tall rolling doors.

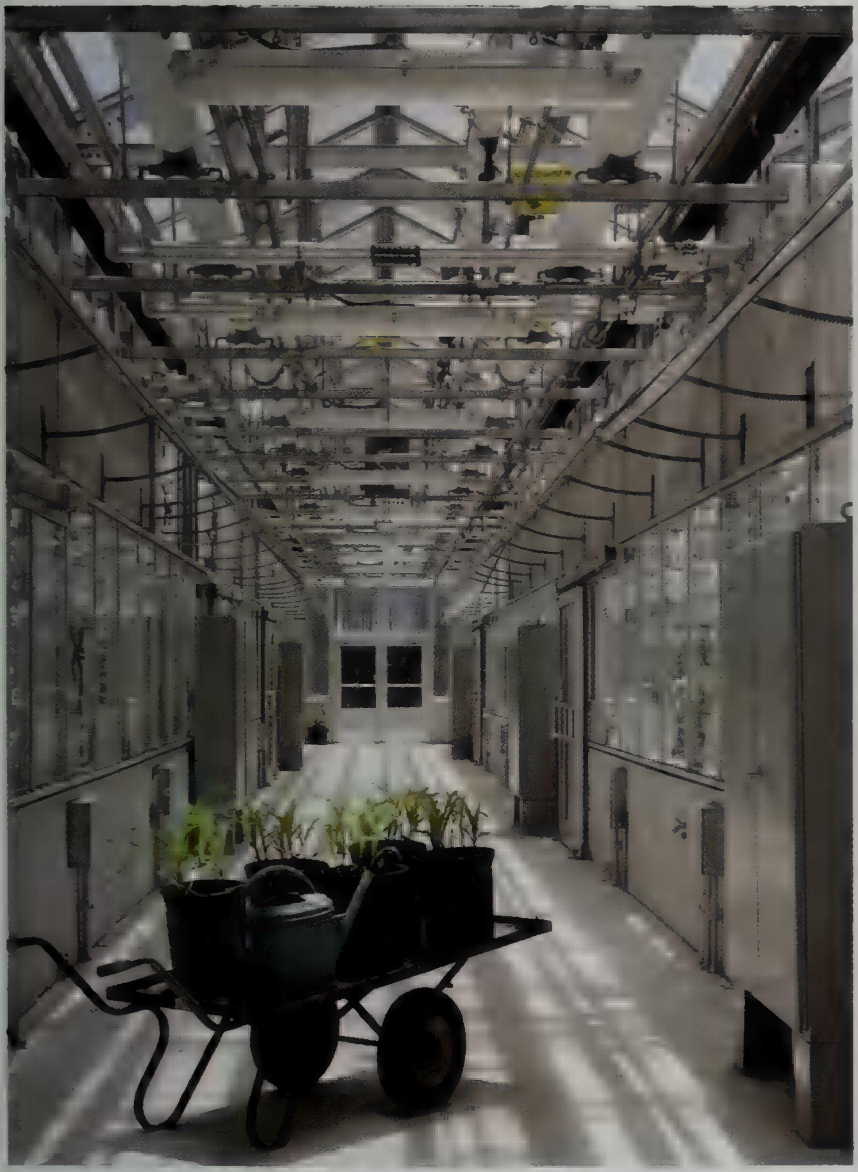
and they seek some relief from it. This place is a little more 'flannel shirt' than a lot of corporate laboratories. That can be very attractive to a scientist who is being recruited."

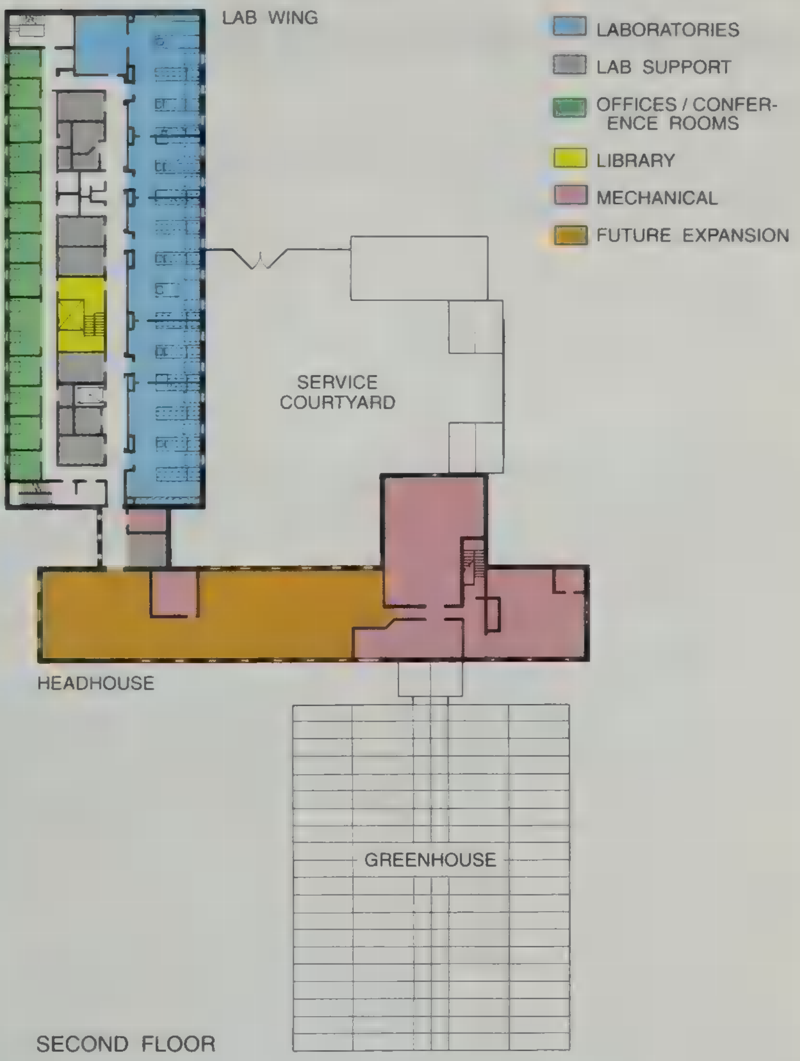
The Discovery Research Center's two-story-high, skylit library (below left, and plans opposite right) is centrally located between corridors of labs and offices to encourage interaction among scientists. Centerbrook countered the typical laboratory-storage problem of unused glassware and miscellaneous equipment stacking up in laboratory corridors by providing glass-fronted storage cabinets there, and illuminating the contents with downlights in the ceiling (below right). An abstract pattern resembling ears of corn appears on the tiled corridor floor. The plastic-walled, state-of-the-art research greenhouse is located away from the other buildings so shadows aren't cast over plants. Automatic roof vents and fans operate when the greenhouse gets too hot (bottom right and opposite). Cross-ventilation from one section of the greenhouse to another cannot occur, or experiments will contaminate one another. High-intensity discharge lighting allows experiments to continue when outside light levels are low.





Credits
Discovery Research Center
Stonington, Conneticut
Owner: *Dekalb Plant Genetics Corporation*
Architect: *Centerbrook Architects and Planners—William Grover, architect of record; Sheri Bryant Lucero, project manager*
Mechanical Engineer: *R.G. Vanderweil Engineers, Inc.*
Structural Engineer: *Besier Gibbel Norden Consulting Engineers*
Civil Engineer: *Doane Engineering*
Contractor: *The Atlas Construction Company*





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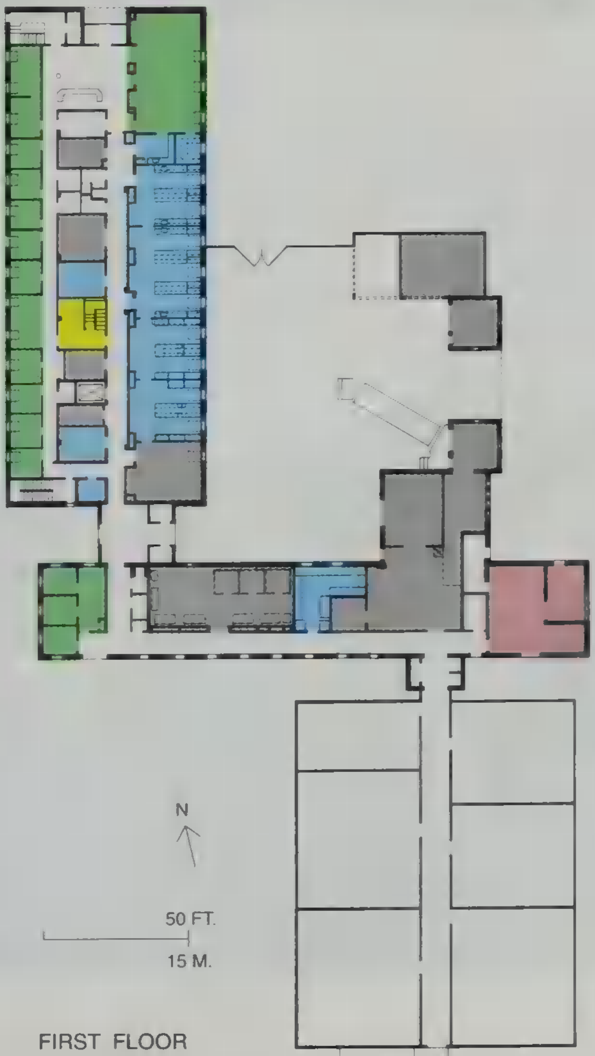


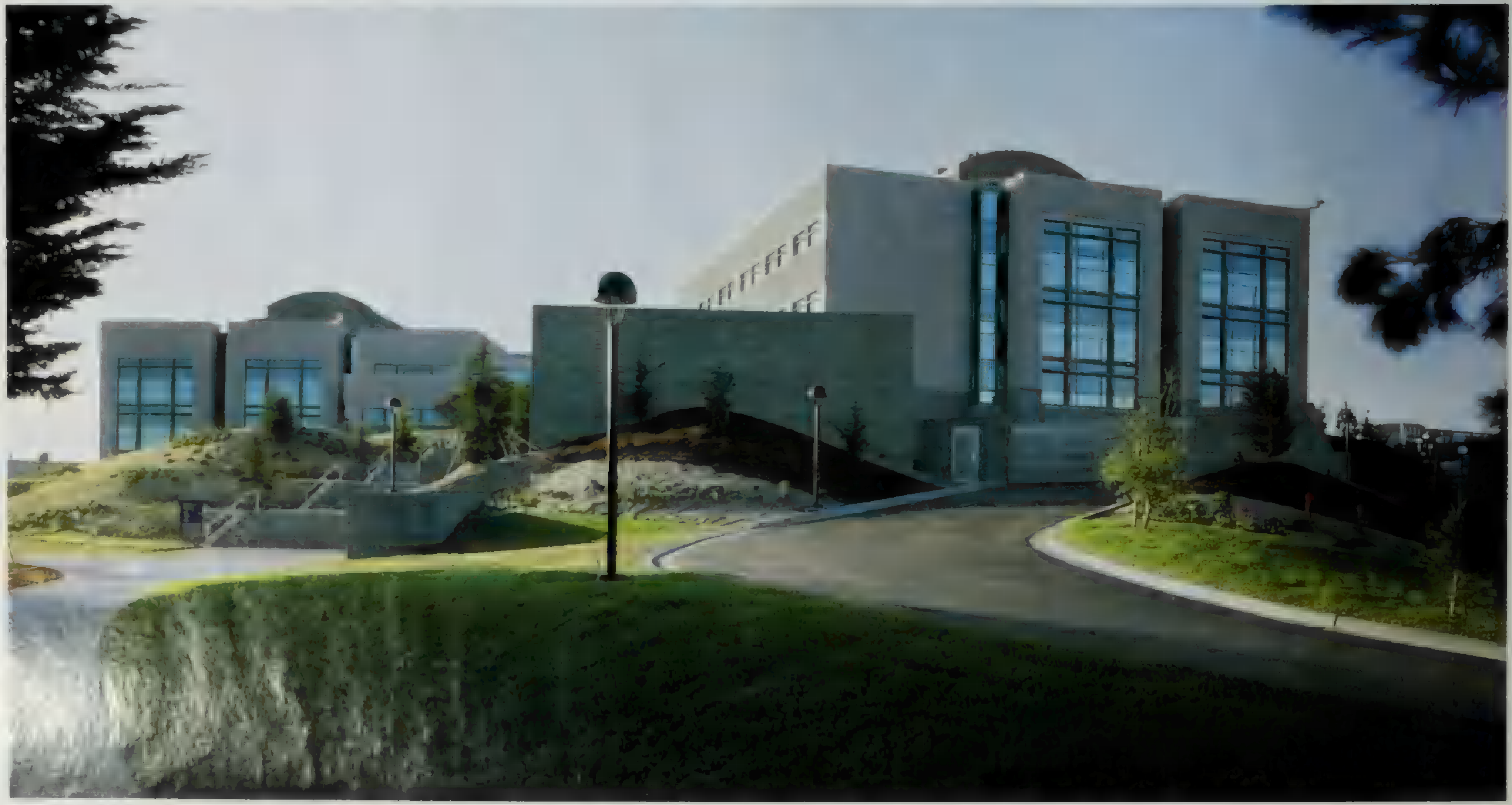
FIRST FLOOR

Founder's Research Center

Genentech, Inc.
South San Francisco, California
SRG Partnership, Inc.

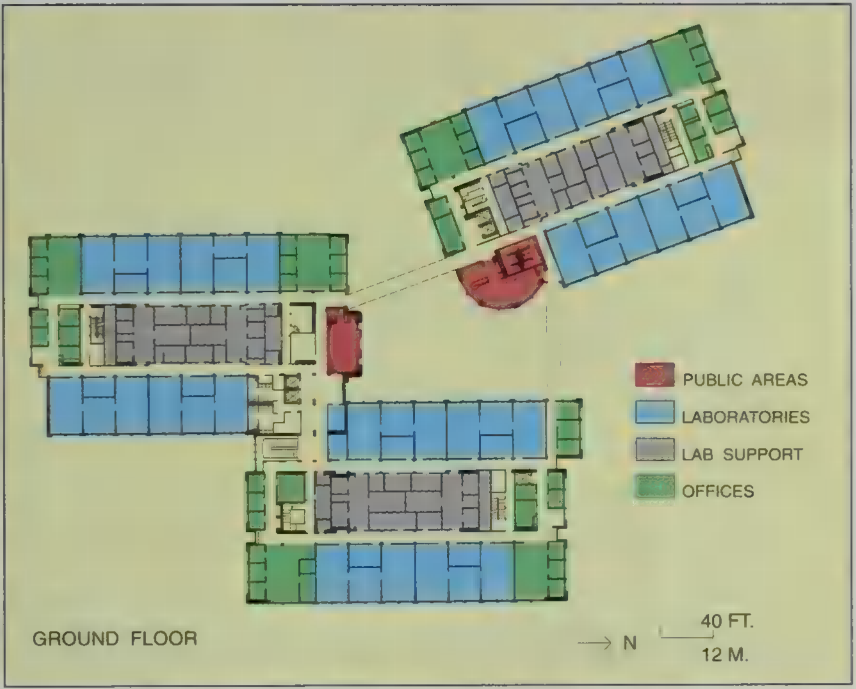
SRG Partnership's challenge in designing a new research laboratory for Genentech, a pharmaceutical manufacturer, was to establish architectural character worth imitating rather than to incorporate elements of the surrounding cut-and filled-landscape of tilt-up concrete industrial buildings dropped into a sea of irrigated lawns. "Our intent was to restore the site, to put in a building that wasn't harsh to its neighbors, that respected their blockiness and manufacturing character, but differed in the way it was landscaped, graded, and had a sense of pedestrian scale." The resulting building is low-rise, built in three wings around a central courtyard. The "lawn" is graded into gently rolling dunes, and seeded with native grasses and wildflowers. Each wing is

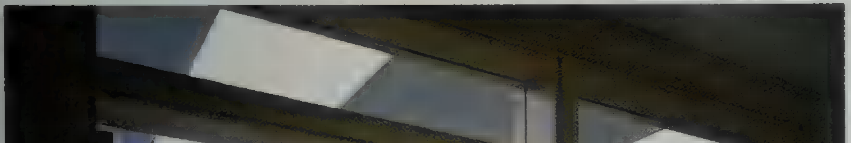
©Douglas Kahn photos



organized into two outer lab and office zones, and an inner core of lab support spaces. Concealed in the inner core is a system of braced steel frames that are double the Uniform Building Code's requirements for seismic bracing. The bracing also helps provide a vibration-free environment for the lab's most sensitive equipment. Piping and other utilities are housed within the braced frames for protection, and are arranged to make crossing of supply and return lines minimal. Each section of the building is parallel to the site's slope so the end of each corridor has a view, thus giving occupants a sense of orientation. A compartmentalization system allowed one-hour corridors to be eliminated, so that glass in doors, sidelights, and transoms could be used.

Credits
Founder's Research Center
Genentech, Inc.
South San Francisco, California
Architect: *SRG Partnership—Jon Schleuning, design principal; Fred Gast, principal-in-charge; Gordon Williams, John Harrison, Timothy Evans, Mark Mikolavitch, project team; Laura Hill, Bonnie Bruce, project interior designers*
Engineers: *Affiliated Engineers (MEP); KPFF Consulting Engineers (Structural); MPA Design (landscape); Brian Kangas & Foulk (civil);*
Consultants: *Acentech (acoustical); URS Consultants (seismic); Richard R. Reitz (laboratory); VDK Architects (programming); ISEC (laboratory furnishings)*





Reacting to the Founder's Research Center's cut- and fill-industrial park context (opposite above) SRG Partnership set the new building into the hillside and gave the site dune-like grading, planting it with native grasses and wildflowers (opposite). Organizing the building into three wings and orienting them with the longitudinal axis parallel to the site's slope allows each corridor to have a view (plan, above). The courtyard (above left) accommodates Genentech's infamous Friday afternoon keg parties. A compartmentalization scheme allowed the typical one-hour corridors to be eliminated, allowing unusually large areas of glass to be used in lab entrances (left). A system of braced steel frames (right) installed in the service core of each wing provides seismic resistance, and protects ducts, utilities and piping.

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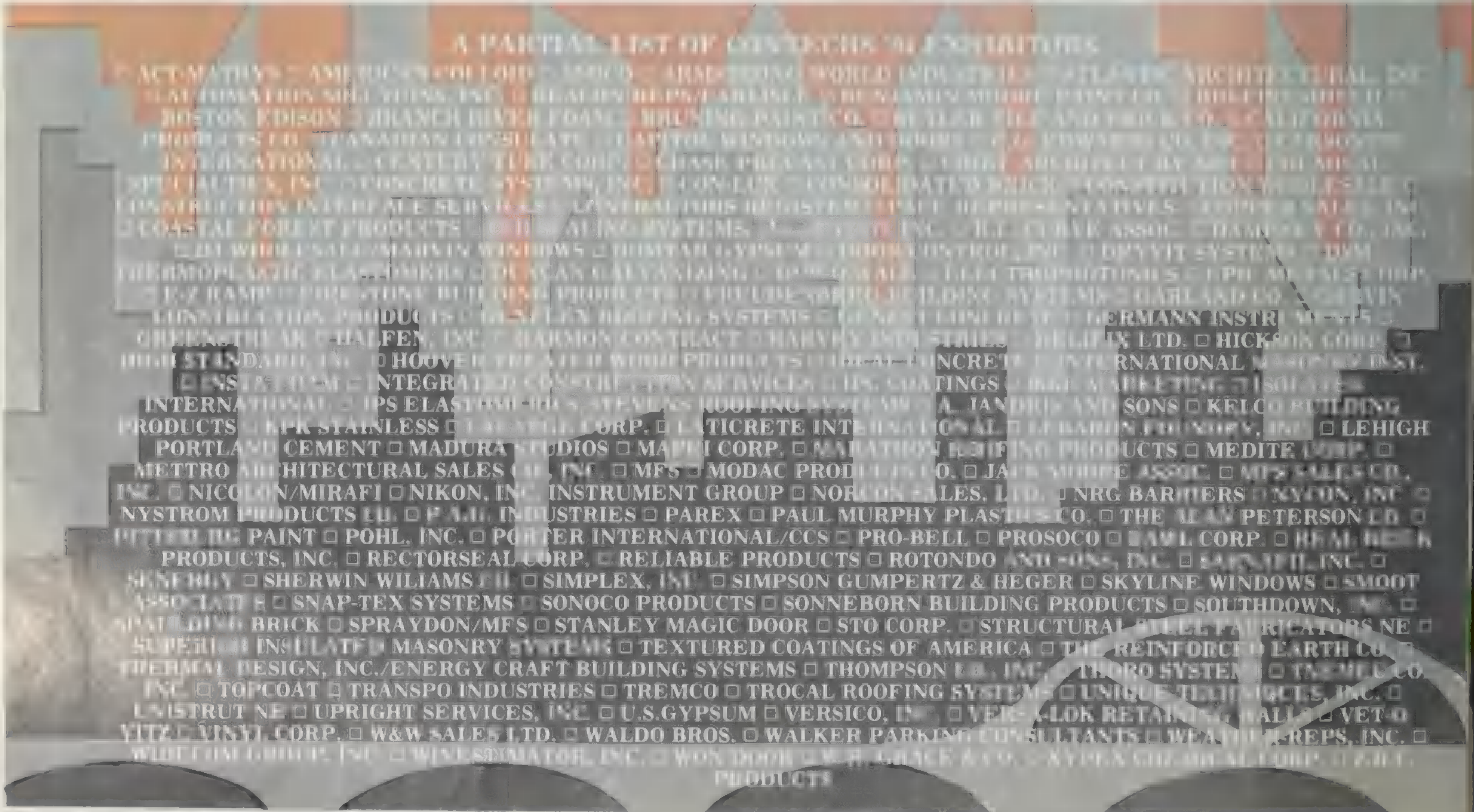

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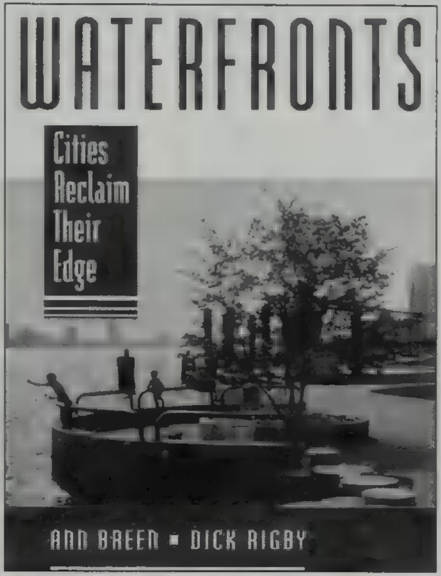

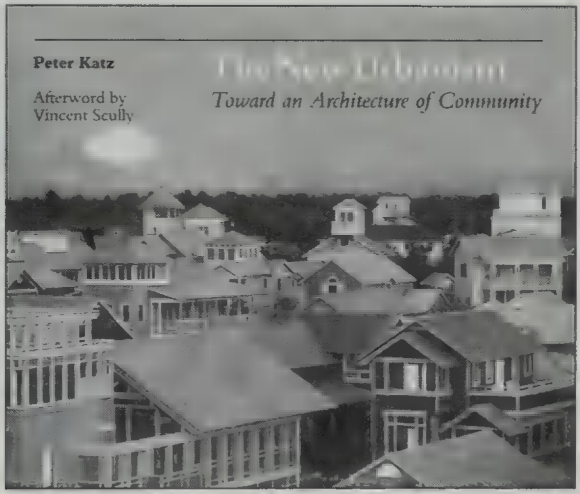

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Salary Surveys

- *AIA Firm Survey Report*
(last published 1991; $95 nonmembers, $50 members). This year updated in forthcoming "Architecture Fact Book." All available from AIA Bookstore (800/242-4140).

- *Principal's Survey of A/E/P & Environmental Firms*
By Mark Zweig & Associates, 1993, $195. Mark Zweig & Associates, Inc., Box 8325, Natick, Mass. 01750 (508/651-1559).

- *Guidelines,* offers pay and fee data sources, Box 749, Orinda, Calif. 94563.

- *1993 Architectural Salaries Survey*
By D. Dietrich Associates, Inc. ($180), P. O. Box 511, Phoenixville, Pa. 19460

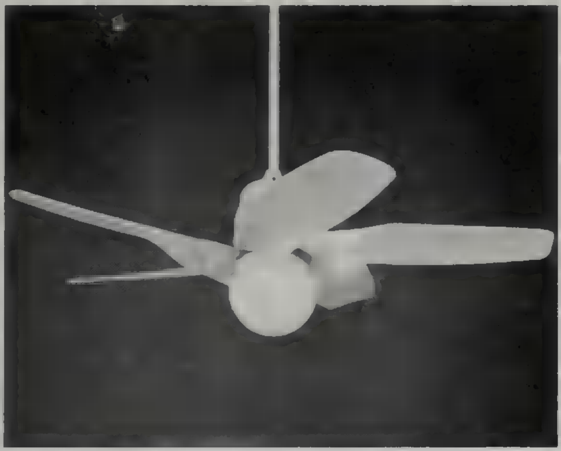
- *Management Design 1993 Survey for California Architectural Firms,* by Managment Design ($130, AIA member, $150 nonmember), 100 Bush Street, Suite 650, San Francisco, Calif. 94104 (415/989-4338, fax 415/989-0128)

- *Massachusetts Architects' Compensation Survey Report*
By the Boston Society of Architects, 1993 ($30 BSA members, $50 nonmembers). Special Publications, BSA, 52 Broad Street, Boston, Mass. 02109-4301 (fax: 617/951-0845).

Corrections

All photographs on pages 105, 106, and 107 of Adelbert Hall at Case Western Reserve University [RECORD, February, 1994] are by Cervin Robinson.

Architrope shared the Art Commission of the City of New York award for the Brooklyn Army Terminal renovations [RECORD, February 1994, page 11].



New Products *Continued from page 42*

312. Ceiling fan

A new 50-inch-diameter ceiling fan has blades that curve inward at the flange couplings to suggest the shape of flower petals. The AirDesign Petal model comes with the manufacturer's K55LX motor, which has three forward and three reverse speeds and three light levels for the 100-watt integrated globe light fixture. The fan has a die-cast zinc finish and comes in textured and basic white. Emerson Electric Co., St. Louis.

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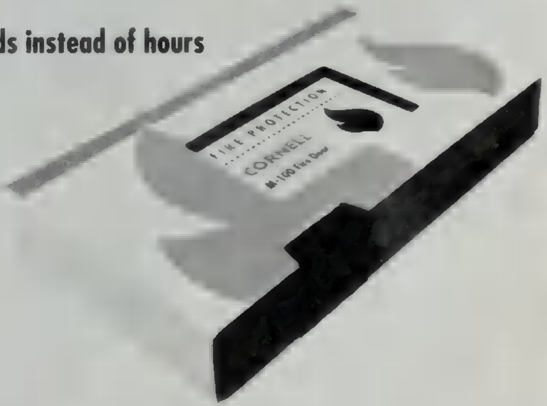

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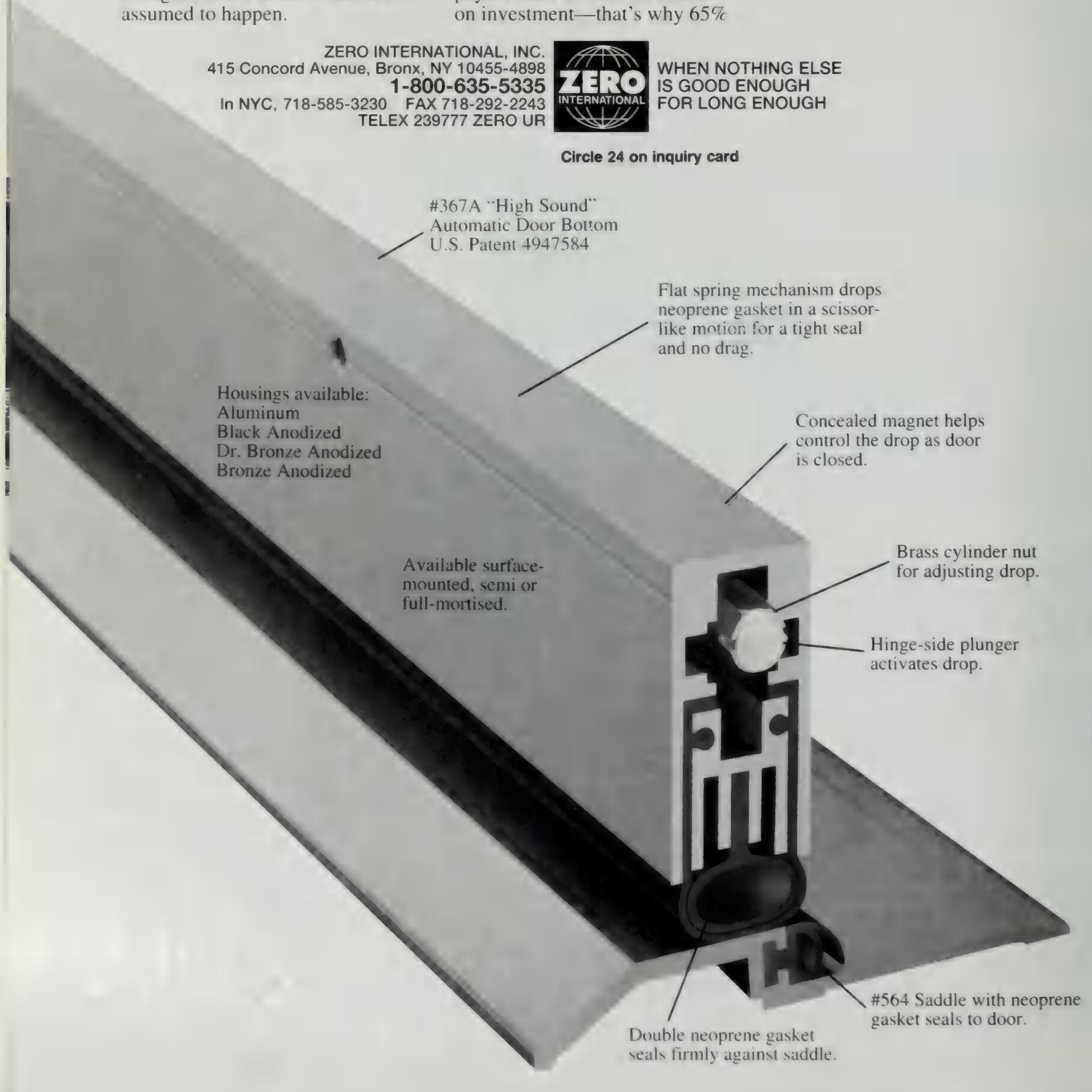
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Manufacturer Sources

For your convenience in locating building materials and other products shown in this month's feature articles, RECORD has asked the architects to identify the products specified.

Pages 60-65
Gethsemane Episcopal Cathedral
Moore/Andersson Architects
EPDM roofing: Carlisle SynTec Systems. Metal roofing: ASTM A526 G90 galvanized iron. Asphalt shingles: CertainTeed Corp. (Saf-T-Lok). Skylights: Kalwall Corp. (Skyroof). Casement windows and French doors: Marvin Windows. Folding partitions: Won-Dor Corp. Solid-core wood doors: Weyerhaeuser. Hardware: Schlage Lock; LCN Closers; Von Duprin; Stanley. Pocket-door assembly: Johnson. Stainless-steel and nickel-copper ceiling grid: Chicago Metallic Corp. Concrete-block and Portland-cement floor colorants: Tamms Industries, Co. Vinyl wallcovering: Genon Wallcovering, DiversiTech General Corp. Ceramic wall tile: American Olean (SatinGlo). Resilient flooring: Armstrong World Industries (Medintech). Interior lighting: George Kovacs; Lithonia; Halo. Medal-halide exterior luminaires: Quality Lighting.

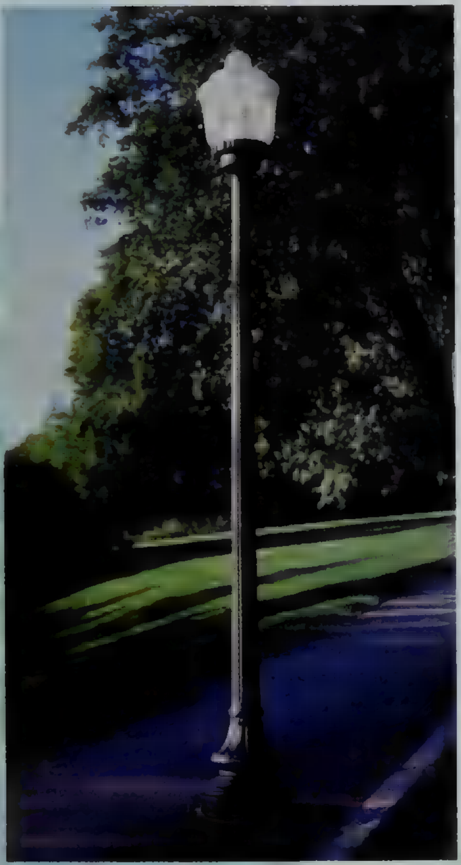
Pages 72-79
Center for the Arts, Yerba Buena Gardens
Maki and Associates, Architecture and Planning
Customized curtain wall: Kawneer (1600 Window Wall System). PVDF finishes: PPG Industries (Duranar XL "Maki Silver"). Solar-control film: Southwall Technologies (Heat Mirror). UV-absorbing laminating interlayer: Monsanto Chemical Co. (Saflex). EIFS cladding: Dryvit (Mountain Fog and Royal Velvet). Glass block (courtyard and Lounge): Nippon Electric Glass (Opaline). Epoxy finish on metal railings: Tnemic. Concrete colorant: L. M. Scofield (Chromix "French Grey"). Pool tile: American Olean. Roof pavers: Terra-Paving, Wausau. Motorized shades: Mechoshade (Thermoveil).

Pages 80-83
107th Precinct Station House
Perkins Eastman & Partners Architects
Ballasted roofing: Firestone Building Products. Projected windows: Coast to Coast Mfg. Co. Insulated tinted glazing: PPG Industries. Storefront: City Window Co. Garage door: Overhead Door Co. Security cameras: Vicon/Motorola Co. Concealed hinges: Stanley Co. Structural glazed facing tile: Stark Ceramics Co. Floor and wall tile: Dal-Tile. Elevators: Dover Elevator Co.

Pages 90-91
Marine Resources Center
Tsoi/Kobus Associates, Inc.
GFRC panels: Architectural Cladding Systems. Cast stone: Atlanta Cast Stone. Granite: Fletcher Granite Co. Sheet-metal roof: Lead-coated copper. Shingle roofing: GAF Building Materials. Windows: Marvin Windows. Entrances: Monarch Industries, Inc. Perforated-metal ceilings: Milgo-Bufkin. Grid: Armstrong World Industries. Laboratory casework: St. Charles Mfg. Co. Paints: Devoe & Raynolds. Ceramic tile: Dal-Tile Corp. Seamless epoxy flooring: Crossfield Products (Dex-O-Tex). Laminate surfaces: Wilsonart. Elevators: Payne. Interior fixtures: LiteControl; Lithonia. Exterior luminaires: Louis Poulson Lighting.

Pages 92-95
Discovery Research Center
Centerbrook Architects and Planners
Aluminum windows and entrances: Efco. Locksets: Russwin. Hinges: McKinney. Door operators: Glynn-Johnson. Electric strikes: Von Duprin. Suspended ceiling: Armstrong. Operable walls: Modernfold. Laboratory casework: Hamilton. Vinyl flooring: American Olean. Chandeliers and sconces: Poulsen. Hydraulic elevator: Schindler

Pages 96-97
Founder's Research Center
SRG Partnership, Inc., Aßrchitect
GFRC: Western Art Stone. Curtain wall: Kawneer Co., Inc. (System 1600). Built-up roofing: Manville (Perma-Ply R). Glass: Viracon. Entrances: Kawneer Co. Inc. Partitions: Modernfold. Locksets; Schlage Lock. Tile: American Olean. Pole-top lighting: Gardco.



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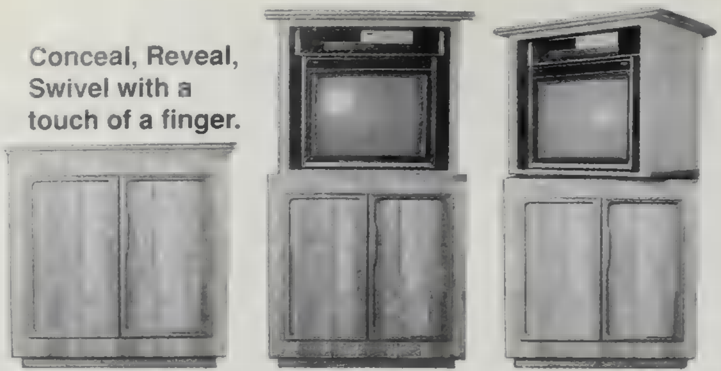

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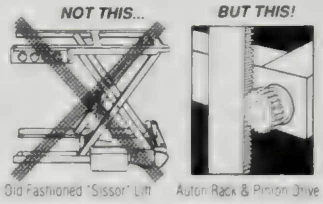

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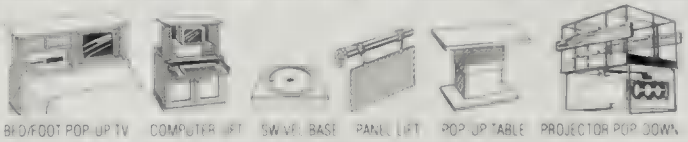

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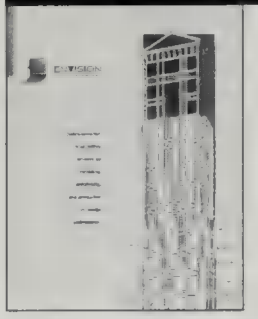
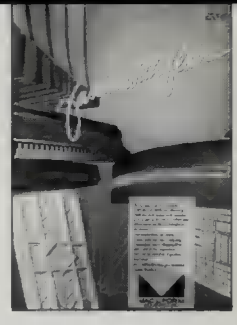
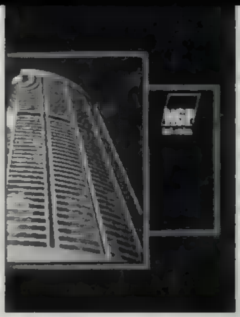


400. Laser-cut study models
A capabilities brochure describes automated model-building services that convert CAD drawings into three-dimensional forms at much lower cost than hand-made models. New digital rendering services make rough design drawings into presentation images in any style, as well as animated walk-throughs. Envision Design Centers, San Francisco.

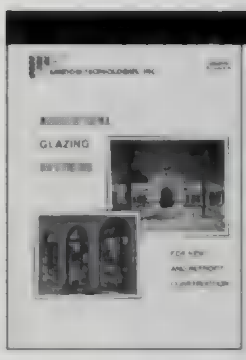


401. Custom-design fascia
Exterior panels, fascias, and other building components made of formed, coextruded plastic materials can achieve realistic simulations of almost any cladding materials, as well as create custom architectural elements. Process permits finishing panels with weatherable films such as Kynar to match metal parts. Vacuform Industries, Inc., Columbus, Ohio.

402. Minimize liability
A free 16-page guide, *Introduction to Better Contracts*, helps design professionals prepare documents that manage risks inherent in the construction process. Covers oral and written agreements, negotiating contracts, and lists specific provisions that can make or break a contract. FAX letterhead requests to (408) 649-3240. DPIC Cos., Monterey, Calif.



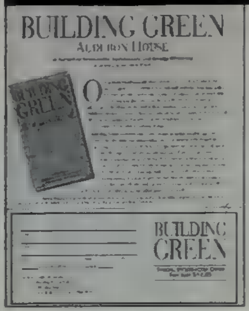
403. Glass and glazing systems
A 40-page catalog highlights glass-fabricating and assembly services for the architectural market. Products include heat-treated glass for high wind-resistance; spandrel glass in custom silkscreened frit and etched patterns; curved glass for skylights, railings, and curtain walls; and fire-rated and special-use glass. HGP Industries, Inc., Dallas.



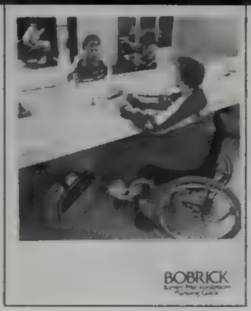
404. Acoustical windows
Guide explains how frames and glazing can be engineered to meet site-specific noise-control problems. Rated acoustical performance is incorporated in sliding, projected, and casement windows, glass doors, and curtain-wall systems. Metal frames permit different colors on interior and exterior. Window Technologies, Inc., Temecula, Calif.

405. Carpet design guide
Prepared with a major nylon manufacturer, a colorful 14-page booklet relates the materials on the outside of a building—a distinctively profiled curtain wall or natural-granite cladding—with carpet patterns and textures available for interior use. Illustrates 13 different carpets in a range of constructions. Mohawk Commercial Carpet, Atlanta.

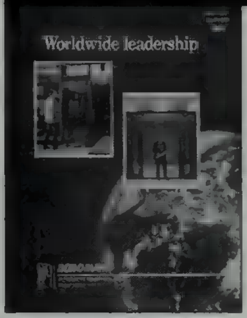
For more information, circle item numbers on Reader Service Card.



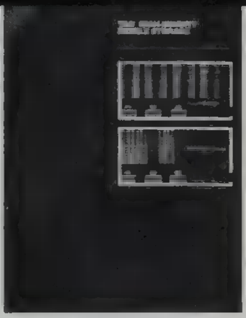
406. Building Green
A 28-minute video shows how architect and client can use an environmentally informed design, innovative technologies, and off-the-shelf products to create a workplace that saves energy, cuts air pollution, boosts recycling, and minimizes use of toxic materials. Cost: $12.95. (212) 979-3026. National Audubon Society, New York City.



407. Barrier-free washrooms
Prepared with Ronald Mace, FAIA, of Barrier-Free Environments, a planning guide offers detailed layouts and ADA requirements for large and small public washrooms. Includes specifics for placement of accessories such as soap dispensers, dryers, and grab bars. Wheelchair- maneuverability drawing template available. Bobrick, North Hollywood, Calif.

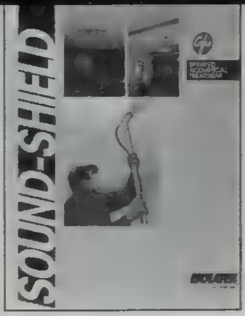


408. Automatic entrances
A short-form catalog covers a full line of swinging and sliding automatic doors, including a new telescopic sliding-door package said to provide a door opening 30 percent larger than other entrances, and ADA-compliant swing-door operators for new and retrofit installations. Dor-O-Matic, Harwood Heights, Ill.



409. High-density storage
TAB's new brochure explains the space-saving advantages of track-mounted, mobile storage units that need no dedicated aisles. Manual, mechanical-assist, and electric-power options provide for a range of budgets. CAD-based loading, layout, and spec assistance offered. TAB Products Co., Palo Alto, Calif.

410. Precast-terrazzo flooring
Precast cementitious terrazzo provides many color, pattern, and installation options. A 12-page catalog illustrates all color choices, details thinset, bonded, and sand-cushioned installation methods, and covers accessories such as stair treads, curbings, wall base, and column covers. Terra Paving Products, Wausau, Wis.



411. Spray-on acoustic control
CAFCO Sound-Shield is said to provide a quieter, more-light-reflecting interior when used on ceiling and walls; surfaces can be painted with minimal reduction in acoustical performance. Heat-Shield thermal insulation has an R-value of 3.85 per in. Noncombustible and asbestos-free. Isolatek International, Stanhope, N. J. *

* *Product Data on CAD disk*

For more information, circle item numbers on Reader Service Card.

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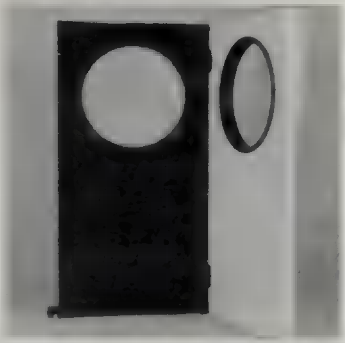

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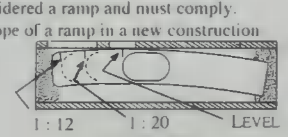
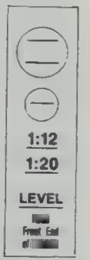
COMPLY WITH ADA REQUIREMENTS

1. **RAMPS:** ADAAG 4.8 states that any part of [illegible] accessible route with [illegible] slope greater than 1:20 shall be considered a ramp and must comply. Furthermore, the maximum slope of a ramp in a new construction shall be 1:12



20-12 SM



20-12 SM

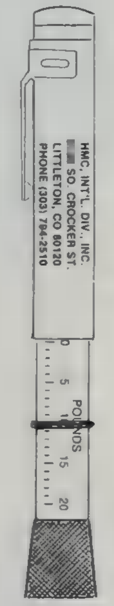
2. **DOORS:** The Americans with Disabilities Act requires that both interior and exterior doors of a building be handicapped accessible.

a. Door Opening Force (4.13.11 ADAAG)

◊ Exterior hinged doors: (Reserved)
The 8.5 pounds (37.4 N) maximum force recommended in ANSI Standard A117.1-1986 [illegible] commonly used.
◊ Interior hinged doors: 5 lbf (22.2N)
◊ Sliding or folding doors: 5 lbf (22.2N)
◊ Automatic/Power Assisted Doors: (4:13.12)
Such doors shall require no more than 15 lbs. (66.6N) [illegible] stop door movement. If a power-assisted door is used, its door-opening force shall comply with 4.13.11 and its closing shall conform to requirements in ANSI A156.19-1984

b. DPG-20: An instrument designed [illegible] measure force between 0-20 lbs. Its scale also includes Newtons and Kilograms.

◊ Set the "O" ring on zero. Press against [illegible] given door approximately handle-high and 30" toward the handle from the door's hinges. Read the amount of force required to open the door indicated by the "O" ring.



DPG-20

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Bilco automatic fire vents offer performance you can count on, the reliable performance it takes to prevent small fires from becoming major disasters. Their automatic venting action exhausts the smoke and super-heated gases through the roof. This reduces the danger of "flash-over", an extremely hazardous condition which allows fires to spread quickly over large areas. Fire venting assists in maintaining good interior visibility, allowing firefighters to locate the seat of the fire.

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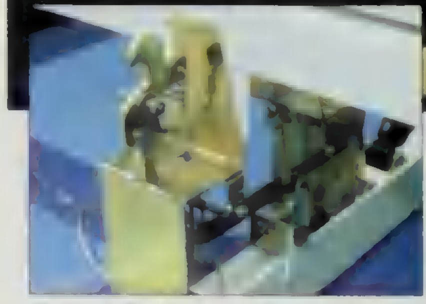

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Attractive, low profile design.

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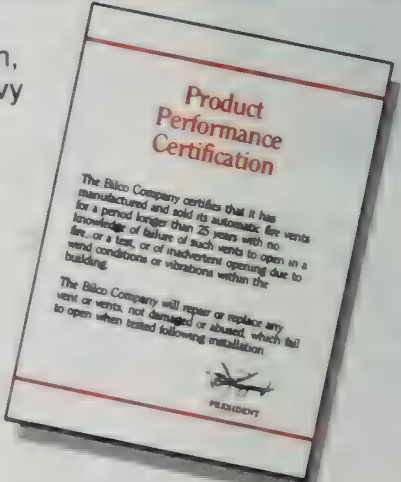

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Register & Grille Mfg., Co.

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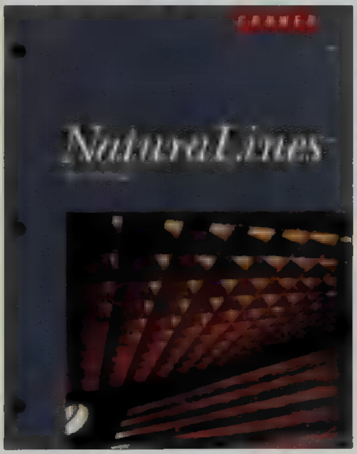

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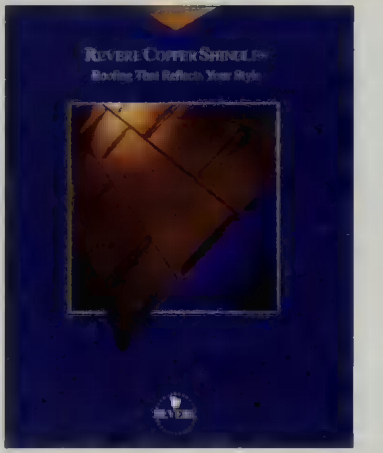

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Van Klassens, Inc.

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Product Literature Showcase

New Products All New Catalog

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Architectural Area Lighting

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New Literature

The new dock equipment brochure from BLUE GIANT incorporates architectural specifications with typical application descriptions and detailed feature photographs. Location photos show the many and varied types of loading dock equipment manufactured by BLUE GIANT and installed around the globe.

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Blue Giant Equipment

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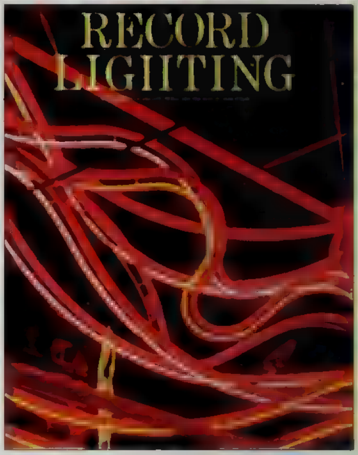

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Hoechst Celanese Corp.

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An Automatic Solution For Readily Achieving ADA Compliance For Barrier-free Entrance Mandate . . .

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Horton Automatics

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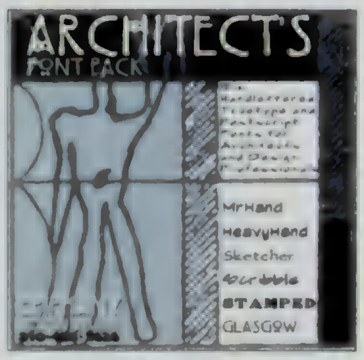
Architect's Font Pack



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Epiphany Design Studio

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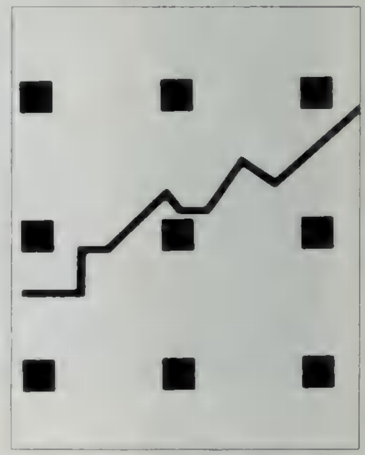

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F.W. Dodge

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Heartland Building Prods.

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Westchester Marble

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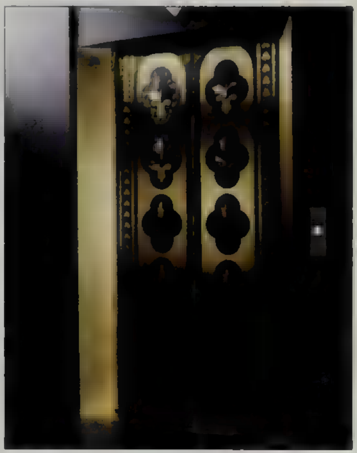

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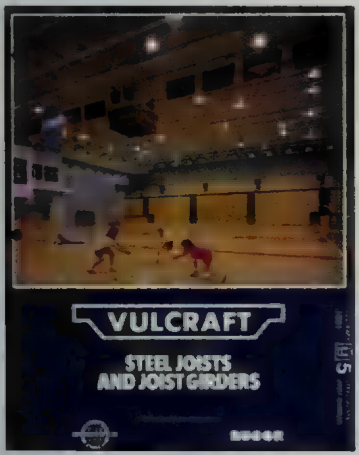

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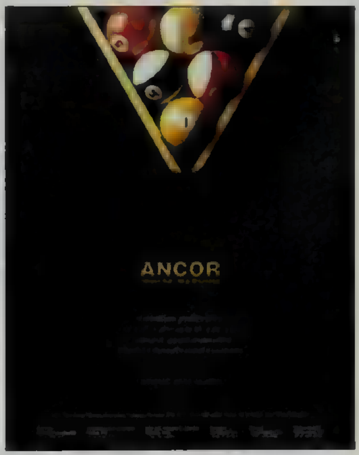

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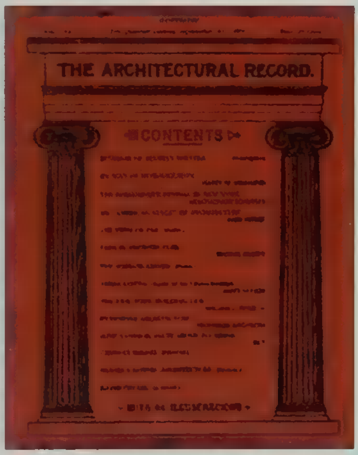

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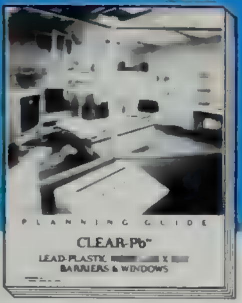

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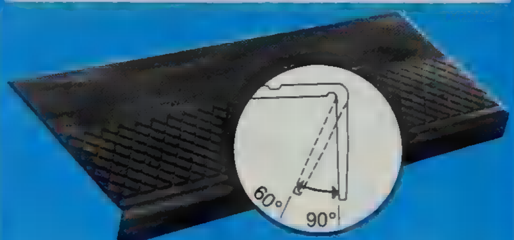

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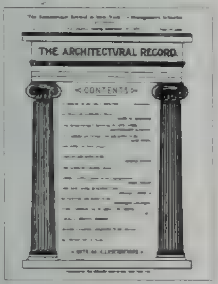

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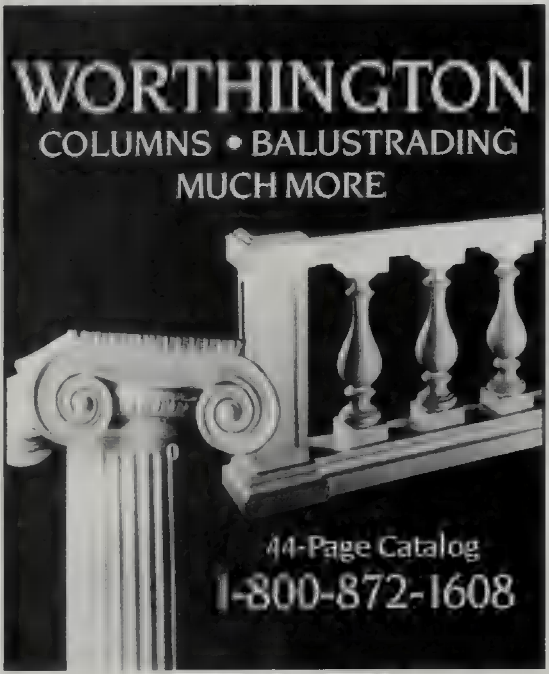

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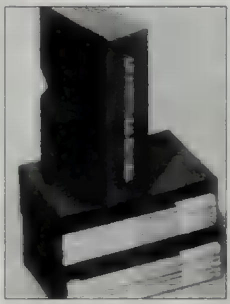

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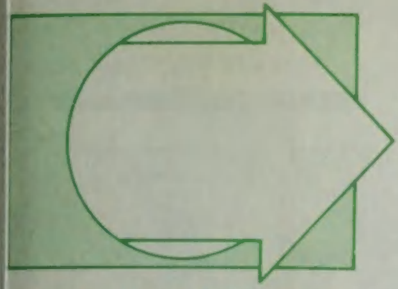

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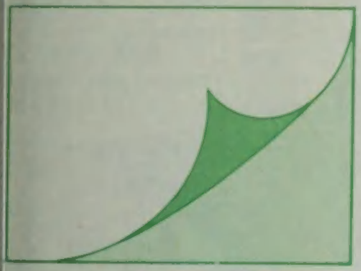

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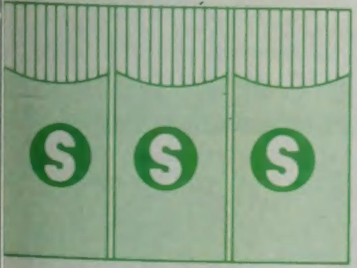

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06	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126	134	142	150	158	166	174	182	190	198	206	214	222	230	238
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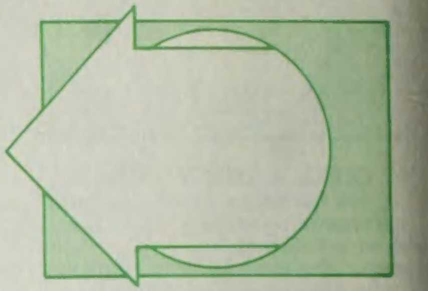

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